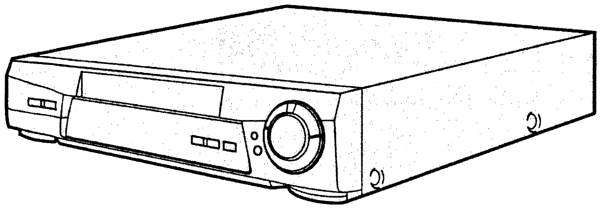
ORDER NO. VRD0004010C2

Service Manual

Video Cassette Recorder

Panasonic VHS PAL

HQ



NV-SJ260EG
NV-SJ260EGM
NV-SJ260EGY
NV-SJ410EG
NV-SJ410EGM
NV-SJ410EGY
NV-SJ410B

Z-MECHANISM

SPECIFICATIONS

ITEM	SPECIFICATION	
POWER	SOURCE: 220-240 V AC 50/60 Hz	
	CONSUMPTION: 19 watts COMSUMPTION WHEN IN STANDBY MODE: Approx. 3W (NV-SJ260EG/EGM/EGY,SD410EG/EGM/EGY)	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL	
TV TUNER SYSTEM	NV-SJ260EG/ EGM/EGY, SJ410EG/EGM/ EGY	VHF: CHE2-CHE12 CHA-CHH2 [ITALY] (PAL/SECAM B) UHF: CH21-CH69 (PAL/SECAM G) CATV: CHS01-CHS41 (PAL/SECAM B)
	NV-SJ410B	UHF: CH21-CH68 (PAL I)
RF OUT SYSTEM	NV-SJ260EG/ EGM/EGY, SJ410EG/EGM/ EGY	UHF: CH21-CH69 (PAL/SECAM G) 71 ± 3 dBμ, 75 Ω close
	NV-SJ410B	UHF: CH21-CH68 (PAL I) 71 ± 3 dBμ, 75 Ω close
VIDEO	HEADS:	2 rotary heads (NV-SJ260EG/EGM/EGY) 4 rotary heads (NV-SJ410EG/EGM/EGY/B) 1 pair for recording and playback (L-R heads) 1 pair for trick play (L'-R' heads) (NV-SD410EG/EGM/EGY/B)
	INPUT:	EURO AV (AV1, AV2) Connector (21 pin) 1.0 Vp-p, 75 Ω terminated VIDEO IN (AV3: FRONT) Connector 1.0 Vp-p, 75 Ω terminated (NV-SD410EG/EGM/EGY/B)
	OUTPUT:	EURO AV (AV1, AV2) Connector (21 pin) 1.0 Vp-p, 75 Ω terminated

ITEM	SPECIFICATION	
AUDIO	HEAD:	1 Stationary head (Normal-mono only)
	INPUT:	EURO AV (AV1, AV2) Connector (21 pin) More than -6dBV (500 mV), 10 kΩ AUDIO IN (AV3: FRONT) Connector More than -6dBV (500 mV), 10 kΩ (NV-SJ410EG/EGM/EGY/B)
	OUTPUT:	EURO AV (AV1, AV2) Connector (21 pin) -6 dBV (500mV), Less than 1kΩ
TAPE SPEED	SP:23.39 mm/s LP: 11.695 mm/s (NV-SJ410EG/EGM/EGY/B) Record/Playback Time: SP: 4 hours with 240 min. type tape LP: 8 hours with 240 min. type tape (NV-SJ410EG/EGM/EGY/B) FF/REW Time: 60 sec. with 180 min. type tape	
OPERATING TEMPERATURE	5°C - 40°C	
OPERATING HUMIDITY	35% - 80%	
DIMENSIONS	430 (W)×87(H)×303(D) mm	
WEIGHT	3.9 kg (NV-SJ260EG/EGM/EGY) 4.1 kg (NV-SJ410EG/EGM/EGY/B)	
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller	

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

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⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

Page

1 INTRODUCTION **3**

2 GENERAL DESCRIPTIONS **4**

- 2.1. SERVICE INFORMATION 4
- 2.2. REMOVAL OF CASSETTE TAPE 7
- 2.3. INTRODUCTION OF VIDEO HEAD CLEANING CASSETTE(POLISHING TYPE) 7
- 2.4. CAUTION FOR AC MAINS LEAD (NV-SJ410B) 8

3 OPERATING INSTRUCTIONS **9**

4 ADJUSTMENT PROCEDURES **28**

- 4.1. DISASSEMBLY METHOD 28
- 4.2. MECHANICAL ADJUSTMENT PROCEDURES 30
- 4.3. ELECTRICAL ADJUSTMENT PROCEDURES 31

5 ABBREVIATIONS **34**

6 INPUT/OUTPUT CHART **38**

- 6.1. INPUT/OUTPUT CHART FOR IC6001 38
- 6.2. TRUTH TABLE (EG/EGM/EGY MODEL) 42
- 6.3. TRUTH TABLE (B MODEL) 45

7 WAVEFORM TABLE **47**

8 BLOCK DIAGRAMS **49**

- 8.1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM 49
- 8.2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM 50

9 SCHEMATIC DIAGRAMS **53**

- 9.1. POWER SCHEMATIC DIAGRAM 53
- 9.2. POWER SUPPLY/RF SECTION IN MAIN SCHEMATIC DIAGRAM 54
- 9.3. TIMER SECTION IN MAIN SCHEMATIC DIAGRAM 55
- 9.4. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM 56
- 9.5. LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM 58
- 9.6. INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM 60
- 9.7. HEAD AMP SCHEMATIC DIAGRAM 61
- 9.8. OSD PACK SCHEMATIC DIAGRAM 62
- 9.9. TV DEMODULATOR PACK SCHEMATIC DIAGRAM 63
- 9.10. AV FRONT SCHEMATIC DIAGRAM (NV-SJ410EG/EGM/EGY/B) 64
- 9.11. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM 64
- 9.12. CAPSTAN UNIT SCHEMATIC DIAGRAM 64

10 CIRCUIT BOARD ASSEMBLIES **65**

- 10.1. POWER C.B.A. 65
- 10.2. MAIN C.B.A. 66
- 10.3. CYLINDER STATOR UNIT 67
- 10.4. AV FRONT C.B.A. (NV-SJ410EG/EGM/EGY/B) 67
- 10.5. OSD PACK C.B.A. 68
- 10.6. TV DEMODULATOR PACK C.B.A. 70

11 EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST **71**

- 11.1. CHASSIS PARTS SECTION 71
- 11.2. CASING PARTS SECTION 72
- 11.3. PACKING PARTS SECTION 73

12 ELECTRICAL REPLACEMENT PARTS LIST **75**

1 INTRODUCTION

This service manual contains technical information which will allow service personnel to understand and service this model.

If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

Note:

1. Adjustment procedures, Disassembly Procedures and Assembly Procedures for Mechanism Chassis are separate volume from this service manual.
   Please refer to the service manual for Z-Mechanism Chassis. (Order No. VRD9802005C2)
2. The Model No. is indicated on the Schematic Diagram and Circuit Board Diagrams as follows.

Model No.	Indication Mark
NV-SJ260EG/EGM	(A)
NV-SJ260EGY	(B)
NV-SJ410EG/EGM	(C)
NV-SJ410EGY	(D)
NV-SJ410B	(E)

2 GENERAL DESCRIPTIONS

2.1. SERVICE INFORMATION

2.1.1. CHANNEL MEMORY IC INITIALIZATION

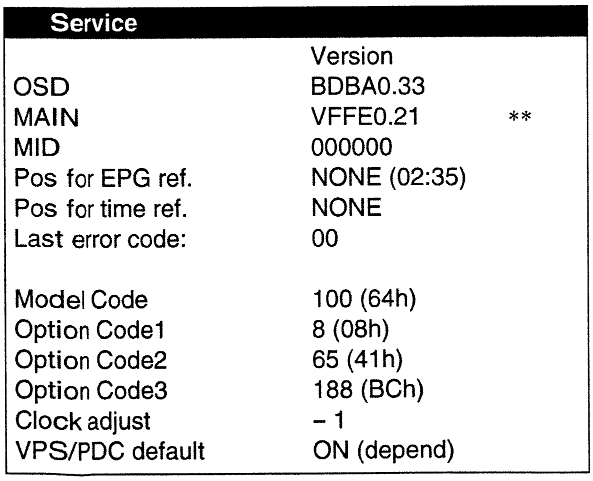
When replacing the Memory IC7801 and/or Oscillator X6001, Memory IC7801 has to be initialized due to the setting value changes.

Note:

1. **When replacing the memory IC7801, the OSD microprocessor IC7701 should be replaced together.**
2. It has to be performed before tuning.
3. Meaning of "MEMORY IC INITIALIZATION" is to make dependency in different models and to distinguish between different features.
4. It does not need to perform when replacing the System Control IC6001.

<CHANNEL MEMORY IC INITIALIZATION>

PROCEDURES	FIP Display	Monitor Screen
Press the FF and EJECT keys simultaneously for 3 seconds.	0 00 00	None
Press the FF and EJECT keys simultaneously more twice.	2 00 00	None
Press the EJECT key for 3 seconds.	2 00 00	None
Press the CH UP key twice.	2 02 00	None
Press the POWER key.	2 02:00 (Colon starts flashing)	Service Screen (See Fig. S1)
Set the Model Code and Option Code by pressing 10-key or [RIGHT] [LEFT] [UP] [DOWN] keys on the Remote Controller Unit. (See Fig.S2)	2 02:00	Service Screen (See Fig.S1)
To release Service Mode, press the POWER key and then press the FF and EJECT keys simultaneously 6 times until the normal indication on the FIP.	10:00	None



```
Service
                      Version
OSD                   BDBA0.33
MAIN                  VFFE0.21        **
MID                   000000
Pos for EPG ref.      NONE (02:35)
Pos for time ref.     NONE
Last error code:      00

Model Code            100 (64h)
Option Code1          8 (08h)
Option Code2          65 (41h)
Option Code3          188 (BCh)
Clock adjust          - 1
VPS/PDC default       ON (depend)
```

Fig.S1 Service Secreen (sample)

Model No.	Model Code	Option Code 1	Option Code 2	Option Code 3
NV-SJ260EG	32	136	65	136
NV-SJ260EGM	32	136	65	136
NV-SJ260EGY	32	136	65	136
NV-SJ410EG	33	08	65	136
NV-SJ410EGM	33	08	65	136
NV-SJ410EGY	33	08	65	136
NV-SJ410B	41	32	64	136

Fig. S2 Model Code & Option Code

2.1.2. CYLINDER UNIT REPLACEMENT

1. CYLINDER UNIT REPLACEMENT
   - a. Remove the mechanism unit from MAIN C.B.A./Chassis by referring “SECTION 2. Disassembly Procedure”.
   - b. Remove the 3 screws (A) of the CYLINDER UNIT with a screw driver.
   - c. Unlock the 4 locking tabs (B) and disconnect the Cylinder fiexible card from the FPC Holder.
   - d. Remove the CYLINDER UNIT.

CAUTION:

Handle the Cylinder fiexible card with care. When it damaged, you should replace whole Cylinder unit.

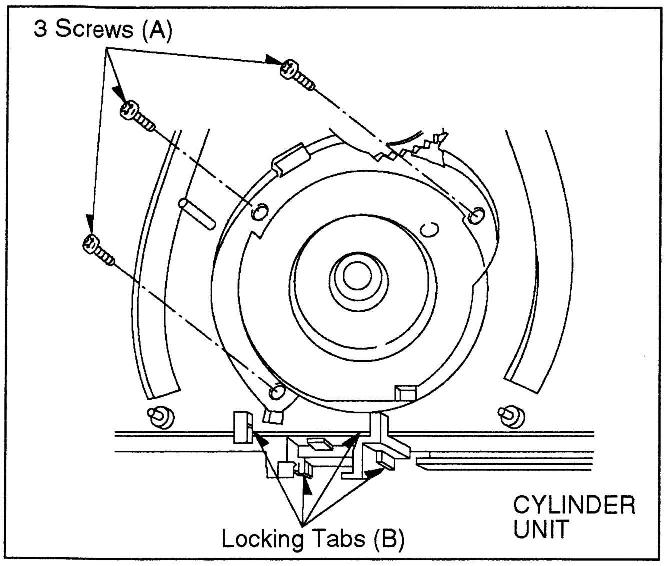

3 Screws (A)
Locking Tabs (B)
CYLINDER UNIT

Fig. S3

2. UPPER CYLINDER DISASSEMBLY
   - a. Remove 2 screws (A).
   - b. Remove the Cylinder Stator Unit.
   - c. Remove 2 screws (B).
   - d. Remove the Cylinder Rotor Unit.
   - e. Loose Hex screw (C) (1.5 mm) and remove the CYLINDER RETAINER.
   - f. Remove the Upper Cylinder.

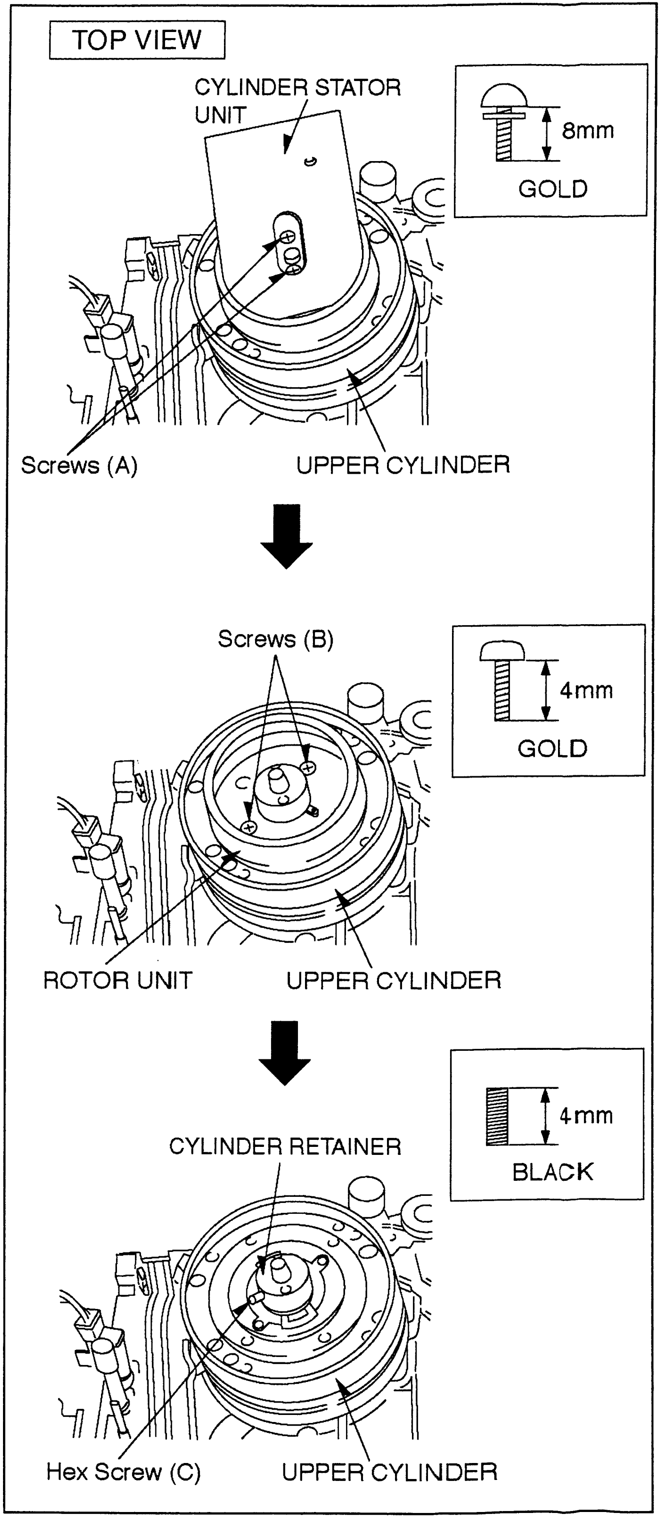

TOP VIEW
CYLINDER STATOR UNIT
8mm
GOLD
Screws (A)
UPPER CYLINDER
Screws (B)
4mm
GOLD
ROTOR UNIT
UPPER CYLINDER
CYLINDER RETAINER
4mm
BLACK
Hex Screw (C)
UPPER CYLINDER

Fig. S4

3. UPPER CYLINDER ASSEMBLY

When reassembling, perform the steps in the reverse order.

Notes:

- a. Install the Cylinder Retainer so that the 2 holes on top of the Cylinder Retainer are at right angles with the P3502 Connection.
- b. Tighten the Hex screw (C) (1.5 mm) while pressing down on top of the Cylinder Retainer.

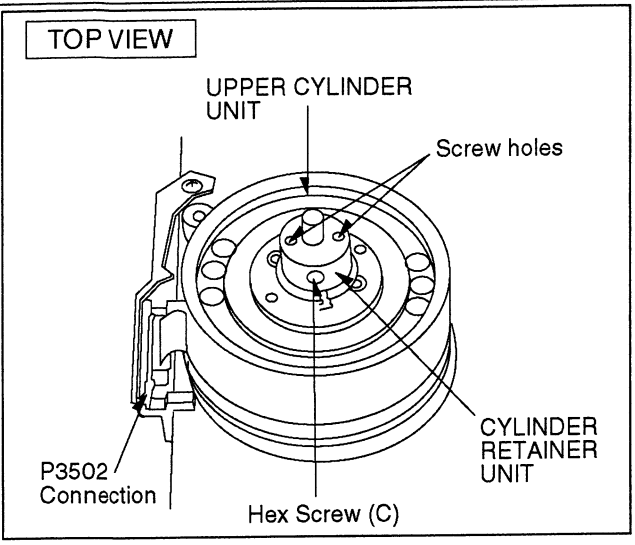

TOP VIEW
UPPER CYLINDER UNIT
Screw holes
CYLINDER RETAINER UNIT
P3502 Connection
Hex Screw (C)

Fig. S5

c. Install the Cylinder Rotor Unit so that the inner hole of the Cylinder Rotor Unit fits to the small projection (D) on top of the Upper Cylinder.

d. Tighten 2 screws (B).

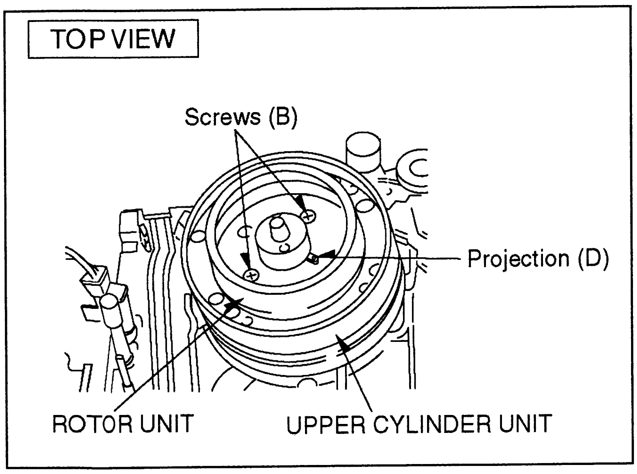

TOP VIEW
Screws (B)
Projection (D)
ROTOR UNIT
UPPER CYLINDER UNIT

Fig. S6

e. install the Cylinder Stator Unit.

f. Tighten 2 screws (A).

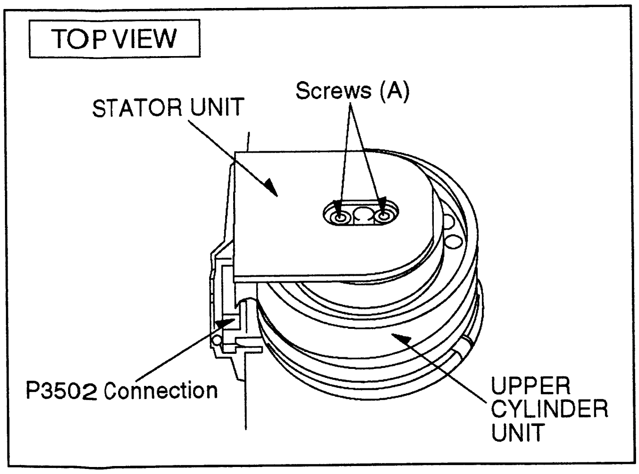

TOP VIEW
STATOR UNIT
Screws (A)
P3502 Connection
UPPER CYLINDER UNIT

Fig. S7

g. Confirm the PG SHIFTER ADJUSTMENT with the alignment tape (PAL: VFJ8125H3F) and adjust it if necessary.

2.1.3. CHECKING OF MAIN C.B.A.

When servicing the MAIN C.B.A., take out the MAIN C.B.A. and mechanism from the frame and turn over.

And then connect the Extension Cable (VFK2744) between the POWER C.B.A. connector (P1103) and the MAIN C.B.A. connector (P1001) as shown in Fig.S8.

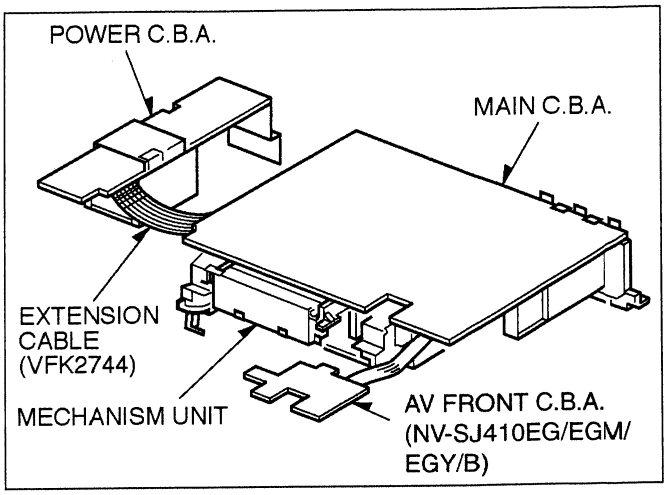

POWER C.B.A.
MAIN C.B.A.
EXTENSION CABLE (VFK2744)
MECHANISM UNIT
AV FRONT C.B.A. (NV-SJ410EG/EGM/ EGY/B)

Fig. S8

2.1.4. FLAT CARD CABLE INSTALLATION

When installing the Flat Card Cable on the connector, install the Flat Card Cable with the cable contacts facing the connector contacts.

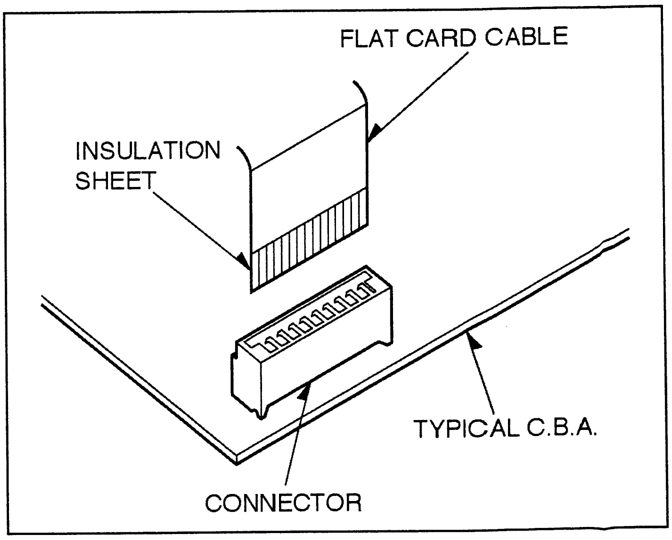

FLAT CARD CABLE
INSULATION SHEET
TYPICAL C.B.A.
CONNECTOR

Fig. S9

2.2. REMOVAL OF CASSETTE TAPE

There are 2 ways to remove a cassette tape.

1. Service Information Display Operation
   a. Press the FF and EJECT keys simultaneosly for 3 seconds and set the Service Mode 7.
   b. Press STOP key in order to rotate the Loading Motor for unloading operation. (Pay an attention of tape slack)
2. Manual Operation
   a. Disconnect the AC Mains Lead and remove the Top Panel.
   b. Rotate the Main Cam Gear clockwise until the Loading Posts move to fully unloaded position as shown in Fig.S10. (Tape is remaining)

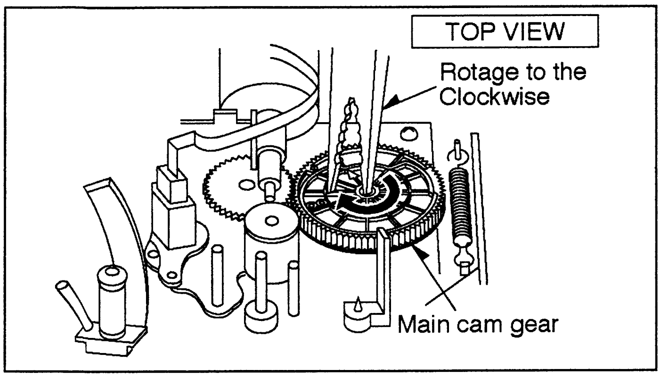


Fig. S10

   c. Rotate the Capstan Motor clockwise from the bottom side to take up the tape.

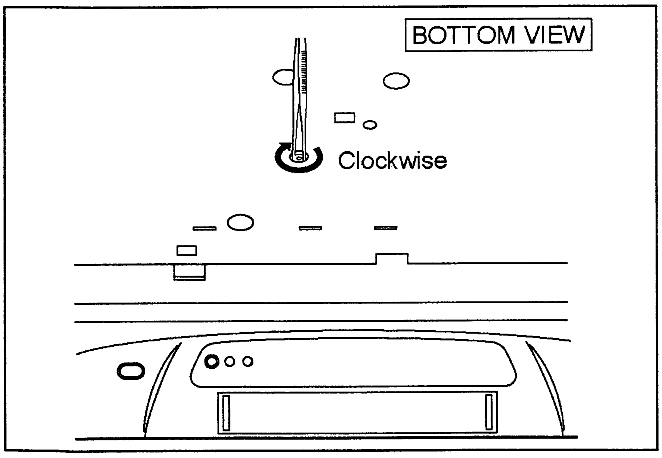
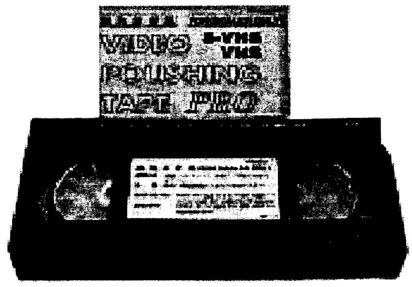


Fig. S11

   d. Rotate the Main Cam Gear clockwise until the cassette tape is ejected.

2.3. INTRODUCTION OF VIDEO HEAD CLEANING CASSETTE (POLISHING TYPE)

1. We are pleased to introduce Panasonic Video Head Cleaning Cassette, **VFK0923FT** [for service purposes] and **VFK0923FSE** [for end users] for all VHS/SVHS VCP and VCR.
2. These cleaning cassettes are exclusive removing the hard and sticky clogging on video heads.
3. These improve the efficiency of video head cleaning service and shortening cleaning time for end users.

VFK0923FT (For Service usage)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	20 m
Usability in a Path	180 Times
	

VFK0823FSE (For end users)	
Type of Cassette	Full VHS Cassette
Cleaning Time	10 Seconds/Time
Tape Length	3.34 m
Usability in a Path	30 Times

Panasonic
PRO
30

Note:

The tape material itself is the same in both types.

2.4. CAUTION FOR AC MAINS LEAD (NV-SJ410B)

For your safety please read the following text carefully
This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5 amp fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5 amps and that it is approved by ASTA or BSI to BS 1362.
Check for the ASTA mark ◈ or the BSI mark ♡ on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstance should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter E or the Earth Symbol ⏚.

How to replace the Fuse

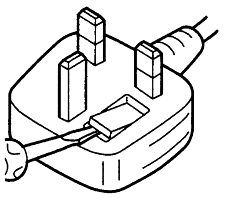
- There are two types of the AC Mains Lead assembly: **A** and **B** as shown below.

1 Open the fuse compartment with a screwdriver.

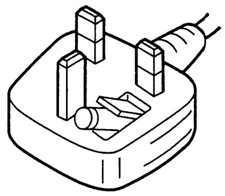
2 Replace the fuse and fuse cover.

TYPE A

1

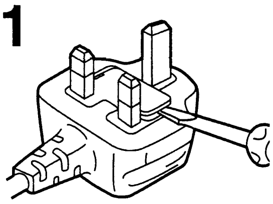


2

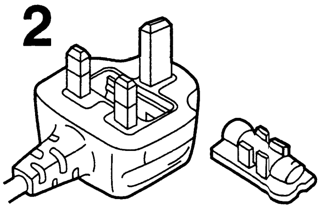


TYPE B

1

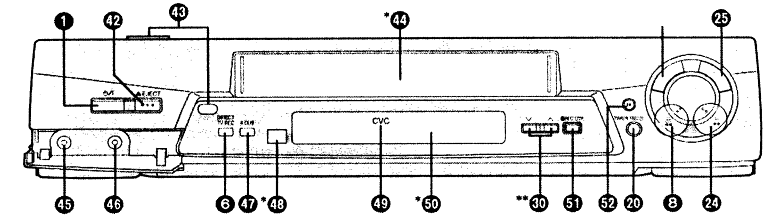


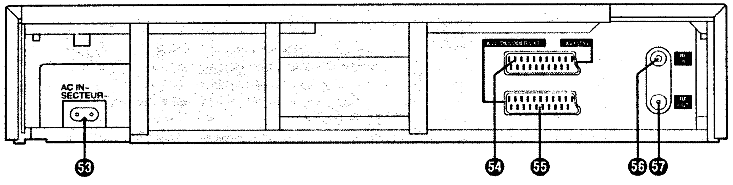
2

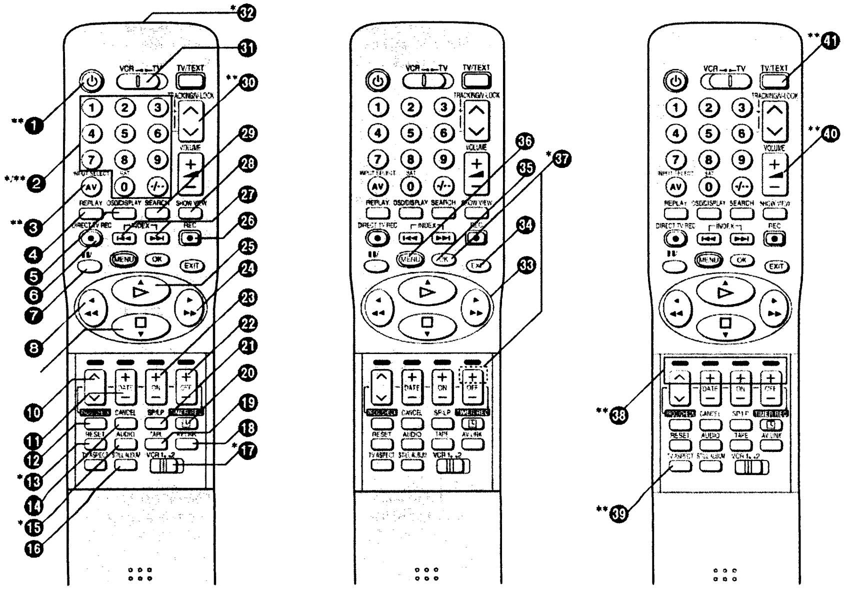


Controls and Components

Keep this page open as you read through the Operating Instructions. Refer to it for the control and component names and numbers which appear in the text.







* See page 4. (VCR Operation)

** See page 6. (TV Operation)

VCR Operation

When you want to operate the VCR, set the VCR/TV switch ㉛ to "VCR".

***② Numeric buttons**

To select the programme positions (1–99) of the VCR.

Example:

09: ⑨

19: (-/--) - ① - ⑨

To select the satellite programme positions

Example:

SAT 9: ⓪ - ⓪ - ⑨

SAT19: ⓪ - ① - ⑨

SAT129: ⓪ - ① - ② - ⑨

- 3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*¹) on the enclosed list of compatible satellite receivers.

To enter a ShowView number.

To enter numbers for various settings.

***⑬ Tape Counter Reset button**

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

***⑮ AUDIO button**

This button does not operate on this VCR.

***⑰ VCR 1/2 switch**

Set to the "VCR 2" position when using two Panasonic VCRs. (See page 37.)

***㉜ Infra-red transmitter**

***㊲ Child Lock Function buttons**
(Convenient function to prevent unauthorized use)

This function deactivates all buttons on the VCR and the remote control. Use this function, when you do not want other people to operate the VCR.

To Activate the Child Lock Function:

1 Hold down the OK and the OFF (+) buttons ㊲ simultaneously until the "▷◁ hold" indication appears in the VCR display.
  - If you press a button while the Child Lock function is on, the "▷◁ hold" indication appears in the VCR display to inform you that no operation is possible.

To Cancel the Child Lock Function:

1 Hold down the OK and the OFF (+) buttons ㊲ simultaneously until the "▷◁ hold" indication disappears.
  - If you disconnect the power cable, the Child Lock function is automatically cancelled after the power backup time of approximately 60 minutes has elapsed.
  - If you cannot cancel the Child Lock function, press the EXIT button ㉞ and perform the operation step 1.

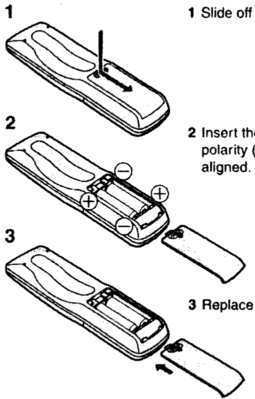
***㊹ Cassette compartment**

***㊽ Infra-red Remote Control Receiver window**

***㊿ VCR display**

Preparing the Remote Control

Inserting Remote Control Batteries



1 Slide off the battery cover.

2 Insert the batteries with the polarity (⊕ and ⊖) correctly aligned.

3 Replace the battery cover.

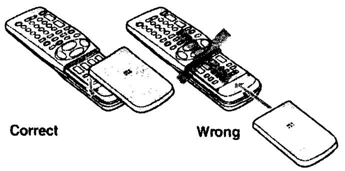
Notes for Battery Replacement:

- The service life of the batteries is approximately 1 year. However, it varies considerably depending on the frequency of use.
- When they are exhausted, replace them with two AA, UM3, or R6 size batteries.
- When the batteries are exhausted, remove them immediately and dispose of them correctly.
- Make sure that the batteries are inserted with the polarity (⊕ and ⊖) correctly aligned.
- Do not mix old battery with new battery.
- Do not mix different battery types, i.e. Alkaline and Manganese.
- Do not use rechargeable (Ni-Cd) batteries.
- Do not heat or short-circuit the batteries.
- When you do not use the remote control for a long time, take out the batteries and store them in a cool, dry place.

If the Sliding Cover of the Remote Control Becomes Detached

If the sliding cover of the remote control becomes detached accidentally, fit it securely in place by placing it on the top of the remote control at the position shown in the illustration below, and pushing it down until it clicks into position.

- It is not possible to fit the sliding cover in place by pushing or sliding it on from the bottom end of the remote control.



Warning and Important Information

As this equipment gets hot during use, operate it in a well ventilated place; do not install this equipment in a confined space such as a book case or similar unit.

IMPORTANT

Your attention is drawn to the fact that the recording of pre-recorded tapes or discs or other published or broadcast material may infringe copyright laws.

WARNING

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

FOR YOUR SAFETY

■ **DO NOT REMOVE OUTER COVER.**
To prevent electric shock, do not remove cover. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.

Remarks

1. This VCR is also capable of receiving SECAM type broadcasting programmes (SECAM B/G) and recording/ playing back its colour television signals.
2. When a cassette which has been recorded on this VCR is played back on a SECAM VCR, the picture may be reproduced in black and white. When it is played back on a PAL VCR without SECAM capability, the picture may not be reproduced in normal colour.
3. When cassettes recorded on a SECAM VCR or SECAM pre-recorded cassettes are played back on this VCR, the picture may be reproduced in black and white.
4. This VCR is not designed for use in France, where a SECAM VCR should be used instead.

Press the VCR-ON/OFF button to switch the VCR from on to standby mode or vice versa. In the standby mode, the VCR is still connected to the mains.

SHOWVIEW is a trademark of Gemstar Development Corporation. The SHOWVIEW system is manufactured under licence from Gemstar Development Corporation.

Setting the Remote Control to Operate Your TV

This setting procedure allows you to operate the TVs of most brands using the remote control supplied with this VCR.

- Some TV models cannot be operated with this remote control.

1 Set the VCR/TV switch ㉛ to "TV".

2 Look up your TV's manufacturer in the list of TVs compatible with the VCR's remote control on the next page.

3 While keeping the TV-ON/OFF button pressed, use the Numeric buttons ❷ to enter the manufacturer's code.
If there is more than one code listed for that manufacturer, try the first code.
Be sure to enter the code in two digits.
Example: 01

4 Check whether you can operate the TV correctly with the VCR's remote control.

If the TV cannot be operated properly:
In step 3, enter the other code listed for that manufacturer and repeat step 4.

TV Operation

The explanations below show you what functions individual buttons have when the VCR/TV switch ㉛ is set to "TV".

" **TV-ON/OFF button**
To switch the TV on from standby mode (OFF) or vice versa.
On some TVs it is only possible to switch the TV to standby mode (OFF) with this button, but not on. In this case, try to turn the TV on with one of the following buttons:
Numeric buttons ❷
AV button ❸
Channel button ㉚

"❷ **Numeric buttons**
To select the programme positions (1−99) on the TV.

"❸ **AV button**
To select the desired AV input on the TV.

"㉚ **Channel button**
To select the desired programme position (TV station) on the TV.

"㊳ **Teletext buttons**
If your TV is equipped for Teletext reception, you can use these buttons to change the teletext information displayed on the screen and select desired information. For details, refer to your TV's operating instructions.

"㊴ **TV ASPECT button**
To switch the screen format between the wide-screen and other formats.

"㊵ **VOLUME button**
To adjust the volume of the TV.

"㊶ **TV/TEXT button**
To switch between normal TV mode and teletext mode.

The 3 Methods for Switching to the AV Input on Your Panasonic TV

Your Panasonic TV uses one of three different methods for switching between TV reception and the AV input(s). Perform the operations steps listed for the switching methods A, B and C below to determine which one your Panasonic TV uses.

A
1 Set the VCR/TV switch ㉛ to "TV".
2 Press the AV button ❸ to switch to the AV Input.
Each press of the AV button ❸ switches between "TV reception" and "AV Input(s)".

B
1 Set the VCR/TV switch ㉛ to "TV".
2 Press the AV button ❸.
Colour bars for selecting the AV Input appear on the TV screen.
3 Follow the instructions displayed on the TV screen to select the desired AV Input from the displayed colour bars for the AV Input by pressing the corresponding colour button ∧ (red) ❿, DATE+ (green) ⓫, ON+ (yellow) ㉓ or OFF+ (blue) ㉒ on the remote control.

C
1 Set the VCR/TV switch ㉛ to "TV".
2 Press the AV button ❸.
The last previously selected AV Input indication appears on the TV screen. The indications for selecting another AV Input also appear, but they disappear a few seconds later.
3 Before the indications for selecting another AV Input disappear, press the ∨ button ❿, DATE− button ⓫, ON− button ㉓ or OFF− button ㉒ to select the desired AV input.
With the following four buttons, you can move and select as follows:

∨ ❿:	Move left
DATE− ⓫:	Move down
ON− ㉓:	Move up
OFF− ㉒:	Move right

List of TVs Compatible with the VCR's Remote Control

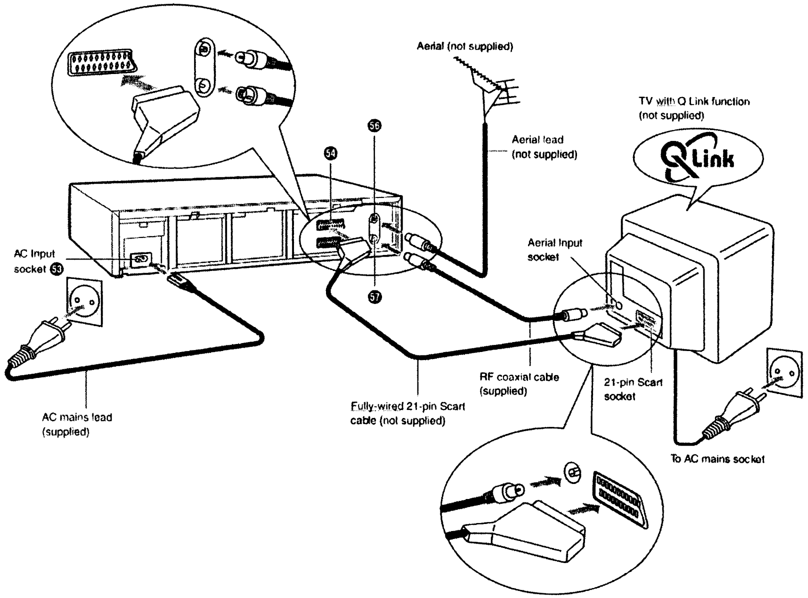
Manufacturer	Code
Panasonic	01–04
AIWA	35
AKAI	27, 30
BLAUPUNKT	09
BRANDT	10, 15
BUSH	05, 06
CURTIS	31
DESMET	05, 31, 33
DUAL	05, 06
ELEMIS	31
FERGUSON	10
GOLDSTAR/LG	31
GOODMANS	05, 06, 31
GRUNDIG	09
HITACHI	22, 23, 31, 40, 41, 42
INNO HIT	34
IRRADIO	30
ITT	25
JVC	17, 39
LOEWE	07
METZ	28, 31
MITSUBISHI	06, 19, 20
MIVAR	24
NEC	36
NOKIA	25–27
NORDMENDE	10
ORION	37
PHILIPS	05, 06
PHONOLA	31, 33
PIONEER	38
PYE	05, 06
RADIOLA	05, 06
SABA	10
SALORA	26
SAMSUNG	31, 32
SANSUI	05, 31, 33
SANYO	21
SBR	06
SCHNEIDER	05, 06, 29, 30, 31
SELECO	06, 25
SHARP	18
SIEMENS	09
SINUDYNE	05, 06, 33
SONY	08
TELEFUNKEN	10–14
THOMSON	10, 15
TOSHIBA	16
WHITE WESTINGHOUSE	05, 06

Connecting and Preparations for a TV Equipped with the Q Link Function

Connections and preparations for a TV equipped with the "Q Link[*1]" function and equipped with a 21-pin Scart socket.
For the connections and preparations for a TV equipped with the "DATA LOGIC[*2]", "Easy Link[*3]", "Megalogic[*4]" or "SMARTLINK[*5]" function and with a 21-pin Scart socket, also read from this page.

For details about the connections, also read TV's operating instructions.

Be sure to keep both the TV and VCR switched off until all connections have been made.
For your safety, be sure not to connect or handle the equipment with wet hands.


Aerial (not supplied)
TV with Q Link function (not supplied)
Q Link
(56)
(54)
Aerial lead (not supplied)
AC Input socket (53)
Aerial Input socket
(57)
RF coaxial cable (supplied)
21-pin Scart socket
AC mains lead (supplied)
Fully-wired 21-pin Scart cable (not supplied)
To AC mains socket

Hints:

- Q Link is an advanced system that offers a range of convenient functions such as automatic copying of the tuning position of all available TV stations (in the same order as they are programmed on the TV) into your VCR's memory (this is called Download) if you connect the VCR to your TV with a fully-wired 21-pin Scart cable (not supplied). Depending on the manufacturer, the equivalent of the Q Link function has a different name and may not work exactly the same.
  - [*1] "Q Link" is a registered trademark of Panasonic.
  - [*2] "DATA LOGIC" is a registered trademark of Metz.
  - [*3] "Easy Link" is a registered trademark of Philips.
  - [*4] "Megalogic" is a registered trademark of Grundig.
  - [*5] "SMARTLINK" is a registered trademark of Sony.

  For details, refer to your TV's operating instructions or consult your dealer.
- Unlike in most commercially sold 21-pin Scart cables, in fully-wired 21-pin Scart cables all 21 pins of one plug are connected to the matching pin of the plug on the other end of the cable. This type of cable is necessary for the Preset Download function to work.

Preset Download Function

The Preset Download function automatically copies the tuning position of all available TV stations into the VCR's memory when you connect the VCR using a fully-wired 21-pin Scart cable to a TV equipped with the Q Link function.

To Simultaneously Set Up this VCR with a New TV

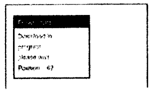
Perform the following operation steps exactly as described to ensure that the Preset Download function works correctly.

◆ First of all, make sure that the VCR is switched off.

1 Switch the TV on.
The TV starts to tune all available TV stations and to adjust the clock.
(This is called Auto Setup function.)

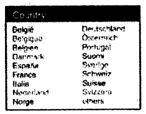
◆ When the TV has finished its own auto setup, the VCR is automatically switched on, and the downloading of the setup data from the TV to the VCR starts. (Applicable to TVs with "Q Link" or "DATA LOGIC" function)

On Screen Display



Indication during downloading

If your TV is equipped with the "Easy Link", "Megalogic" or "SMARTLINK" function, the Country setting menu appears on the TV screen before downloading. Press the Cursor buttons (▲▼◄) ㉝ to select the desired country. Then, press the OK button ㉟ and the downloading automatically starts.



Country

België	Deutschland
Belgique	Österreich
Belgien	Portugal
Danmark	Suomi
España	Sverige
France	Schweiz
Italia	Suisse
Nederland	Svizzera
Norge	others

Menu for Country setting

◆ The VCR's Auto Setup (Downloading) is complete when the programme position and the current time appear in the VCR display.

VCR display

Programme position

Indication when the current time is 16:45

Note:

- If you accidentally switch on the VCR before the TV, downloading of the setup data from the TV may not be performed correctly. In this case, follow the operation steps below.

1 Wait until the Auto Setup is complete on both the TV and the VCR.
2 Press the MENU button ㊱ to display the OSD Main menu on the TV screen.
3 Press the Cursor buttons (▲▼◄) ㉝ to select "Tuning" and then "Download".
4 Press the OK button ㉟ twice. Downloading of the setup data from the TV to the VCR starts.
5 When the programme position and the current time appear in the VCR display, downloading is complete.

Hints:

- If you use a Panasonic TV and perform the operation step 1, starting the downloading of the setup data will automatically display the "Download" indication. However, in case of a TV of another make, the "Download" indication may not appear. In this case, select the AV input on your TV if you want to see the "Download" indication.
- If you select "Schweiz", "Suisse" or "Svizzera" on the Country setting menu, the Display setting menu appears automatically to let you set the item "Power save" to "ON". In this setting, the VCR's power consumption is minimised when it is off (Standby mode).To turn the VCR on, keep the VCR-ON/OFF button pressed on the VCR main unit. It is not possible to turn it on with the remote control.

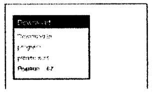
To Set Up this VCR with a TV Already in Use

1 Switch the TV on.

2 Select the AV input on your TV.

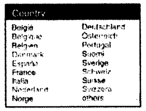
3 Set the VCR/TV switch ㉛ to "VCR".

4 Press the VCR-ON/OFF button to switch the VCR on.
Downloading of the setup data starts automatically. (Applicable to TVs with "Q Link" or "DATA LOGIC" function)



Indication during downloading

If your TV is equipped with the "Easy Link", "Megalogic"or "SMARTLINK" function, the Country setting menu appears on the TV screen before downloading. Press the Cursor buttons (▲▼◄) ㉝ to select the desired country. Then, press the OK button ㉟ and the downloading automatically starts.



Country

België	Deutschland
Belgique	Österreich
Belgien	Portugal
Danmark	Suomi
España	Sverige
France	Schweiz
Italia	Suisse
Nederland	Svizzera
Norge	others

Menu for Country setting

◆ When the programme position and the current time appear in the VCR display, the VCR's Auto Setup (Downloading) is complete.

Programme position

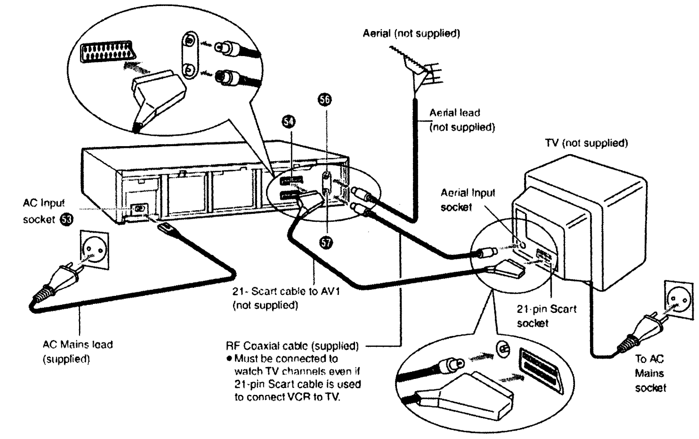
Indication when the current time is 16:45

Hint:

- If you select "Schweiz", "Suisse" or "Svizzera" on the Country setting menu, the Display setting menu appears automatically to let you set the item "Power save" to "ON". In this setting, the VCR's power consumption is minimised when it is off (Standby mode).To turn the VCR on, keep the VCR-ON/OFF button pressed on the VCR main unit. It is not possible to turn it on with the remote control.

Connecting and Preparations for a TV Not Equipped with the Q Link Function

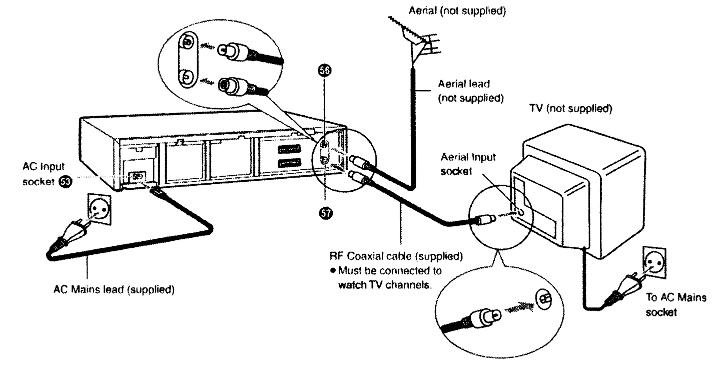
Method 1. If you are connecting your VCR to a TV using RF coaxial cable and 21-pin Scart cable, then follow the steps below. (AV Connection)



Aerial (not supplied)
㊻
㊹
Aerial lead (not supplied)
TV (not supplied)
AC Input socket ㊸
Aerial Input socket
㊼
21- Scart cable to AV1 (not supplied)
21-pin Scart socket
AC Mains lead (supplied)
RF Coaxial cable (supplied)
• Must be connected to watch TV channels even if 21-pin Scart cable is used to connect VCR to TV.
To AC Mains socket

After completing the above connections, proceed to the Auto Setup page (Page 11).

or Method 2. If you are connecting your VCR to a TV using only RF coaxial cable, then follow the steps below. (RF Connection)



Aerial (not supplied)
㊻
Aerial lead (not supplied)
TV (not supplied)
AC Input socket ㊸
Aerial Input socket
㊼
RF Coaxial cable (supplied)
• Must be connected to watch TV channels.
AC Mains lead (supplied)
To AC Mains socket

After completing the above connections, proceed to the Auto Setup page (Page 12).

If you are connecting your VCR to a TV using Method 1, follow the operations explained below.

Auto Setup Function

The Auto Setup function automatically tunes all available TV stations and sets the VCR's clock to the current date and time. If the tuning and time/date settings are not correct, performing timer recordings is not possible.

11 Switch the TV on.

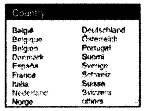
12 Select the AV input on your TV.

13 Set the VCR/TV switch ㉛ to "VCR".

14 Press the VCR-ON/OFF button to switch the VCR on.
The Country setting menu appears on the TV screen.

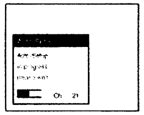
15 Press the Cursor buttons (▲▼◀) ㉝ to select the country where you are using the VCR.

On Screen Display



Menu for Country setting

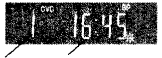
16 Press the OK button ㉟ and the VCR's Auto Setup automatically starts and tunes all available TV stations and also sets the clock. This takes about 5 minutes.



Indication during Auto Setup

17 When the indication shown on the right appears on the VCR display, the Auto Setup is complete.

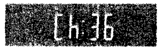
VCR display



Programme position

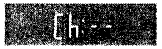
Indication when the current time is 16:45

18 Press the MENU button ㊱ for more than 5 seconds so that the RF output channel number appears on the VCR display.
The initial setting is channel 36.



Indication when the RF output channel is 36 (example)

19 Press the Numeric button "0" ❷ so that the displayed RF output channel number changes to "– –".



Indication after changing the RF output channel to "– –"

10 Press the OK button ㉟ to conclude the setting.

◆ **To Cancel the Auto Setup Before It Has Finished**
Press the EXIT button ㉞.

Hint:

- If you select "Schweiz", "Suisse" or "Svizzera" on the Country setting menu, the Display setting menu appears automatically to let you set the item "Power save" to "ON". In this setting, the VCR's power consumption is minimised when it is off (Standby mode).To turn the VCR on, keep the VCR-ON/OFF button pressed on the VCR main unit. It is not possible to turn it on with the remote control.

When the clock setting menu appears after Auto Setup has finished:

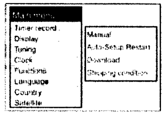
1 Press the Cursor buttons (▲▼◀) ㉝ to set the correct time and date.

2 Press the OK button ㉟ to conclude the setting.

3 Press the EXIT button ㉞ to exit the On Screen Display.

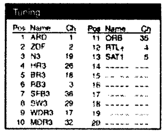
To Confirm that the TV Stations Have Been Tuned Correctly by the Auto Setup Function

1 Press the MENU button ㊱ to display the OSD Main menu on the TV screen.



2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations and confirm that all available TV stations have been set correctly.


Tuning

Pos	Name	Ch	Pos	Name	Ch
1	ARD	1	11	ORB	35
2	ZDF	2	12	RTL4	4
3	N3	19	13	SAT1	5
4	HR3	26	14	-----	---
5	BR3	18	15	-----	---
6	RB3	3	16	-----	---
7	SFB3	38	17	-----	---
8	SW3	29	18	-----	---
9	WDR3	17	19	-----	---
10	MDR3	32	20	-----	---

List of tuned TV stations (example)

4 Press the EXIT button ㉞ to exit the On Screen Display.

When the station names and/or channel numbers have not been set correctly:
See page 30 for details.

If you are connecting your VCR to a TV using Method 2, follow the operations explained below.

To be able to watch the VCR picture on the TV, RF connection requires the video playback channel to be set on the TV.

01 Switch the TV on.

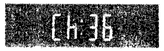
02 Select an unoccupied programme position (which is not tuned to a TV station).
If you are using a Panasonic TV, select programme position "0".

03 Set the VCR/TV switch ㉛ to "VCR".

04 Press the VCR-ON/OFF button to switch the VCR on.

05 Press the MENU button ㊱ for more than 5 seconds. The number of the RF output channel appears on the VCR display.
The initial setting is channel 36.

VCR display

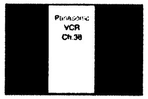


Indication when the RF output channel is 36 (example)

06 Tune your TV until the test pattern shown on the right appears on the TV screen.
Now, the setting of the RF output channel is complete.

- As the tuning method differs depending on the TV you are using, refer to your TV's operating instructions for details about tuning.

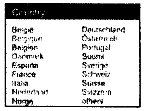
On Screen Display



Indication of the test pattern

07 Press the OK button ㉟.
The Country setting menu appears on the TV screen.

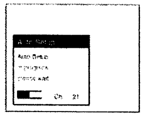
08 Press the Cursor buttons (▲▼◀) ㉝ to select the country where you are using the VCR.



Menu for Country setting

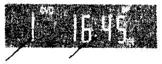
09 Press the OK button ㉟ and the VCR's Auto Setup automatically starts and tunes all available TV stations and also sets the clock. This takes about 5 minutes.

- If you select "Schweiz", "Suisse" or "Svizzera" on the Country setting menu, see page 11.



Indication during Auto Setup

10 When the indication shown on the right appears on the VCR display, the Auto Setup is complete



Programme position

Indication when the current time is 16:45

◆ **To Cancel the Auto Setup Before It Has Finished**
Press the EXIT button ㉞.

When the clock setting menu appears after Auto Setup has finished:
See page 11.

To Confirm that the TV Stations Have Been Tuned Correctly by the Auto Setup Function

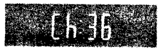
See page 11.

If the Picture on the TV's Video Playback Channel Is Distorted

If, after setup, you select the video playback channel on the TV and view a TV programme on a programme position selected on the VCR, some interference may occur in certain cases If this happens, you can minimise the distortion by changing the RF output channel on the VCR to another number. Follow the operations below.

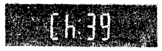
1 Set the VCR/TV switch ㉛ to "VCR".

2 Press the MENU button ㊱ for more than 5 seconds.
The number of the RF output channel appears on the VCR display.
The initial setting is channel 36.



Indication when the RF output channel is 36 (example)

3 Press the numeric buttons ❷ to change the RF output channel.
Enter a channel number which differs by 2 or 3 from the one initially set number. For example, as the original number is 36, enter 39.



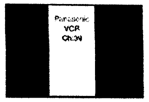
Indication after changing the RF output channel to 39 (example)

4 Press the OK button ㉟ to conclude the setting.

Note When You Have Changed the RF Output Channel:
After changing the RF output channel to a different number, be sure to retune your TV to the VCR's new RF output channel. (For details about tuning, refer to your TV's operating instructions.)

1 Press the MENU button ㊱ for more than 5 seconds.

2 When the test pattern shown on the right appears sharp and clear on the TV screen, the tuning is complete.



Test pattern indication

3 Press the EXIT button ㉞ to exit the On Screen Display.

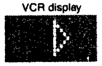
Playback

Preparations
- Confirm that the VCR is on.
- Confirm that the TV is on and the VCR viewing channel is selected.
- Insert a recorded video cassette.

For Normal Playback:

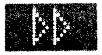
Press the Play button ㉕.

VCR display



For Cue Playback:

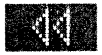
During playback, tap the Fast Forward button ㉔.



- To return to normal playback, press the Play button ㉕.
- If you press and hold down the Fast Forward button ㉔, cue playback continues for as long as you keep the button pressed.

For Review Playback:

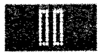
During playback, tap the Rewind button ⑧.



- To return to normal playback, press the Play button ㉕.
- If you press and hold down the Rewind button ⑧, review playback continues for as long as you keep the button pressed.

For Still Playback:

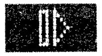
During playback, press the Pause/Slow button ⑦.



- To return to normal playback, press the Play button ㉕ or the Pause/Slow button ⑦.

For Slow Playback:

During playback, keep the Pause/Slow button ⑦ pressed for 2 seconds or more.



- To return to normal playback, press the Play button ㉕.

Fast-forwarding or Rewinding the Tape:

To fast-forward the tape:
Press the Fast Forward button ㉔ in the stop mode.

To rewind the tape:
Press the Rewind button ⑧ in the stop mode.

- To stop fast-forwarding or rewinding, press the Stop button ⑨.
- To briefly view the picture during fast-forwarding or rewinding, press and hold down the corresponding button.

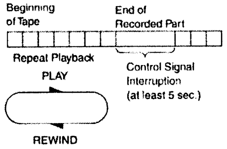
To Stop Playback

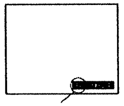
Press the Stop button ⑨.

Notes:
- Cue, review or slow playback will be automatically cancelled after 10 minutes, and still playback after 5 minutes.
- During playback function other than normal playback, horizontal noise bars may appear in the picture, the colour of the picture may be unstable, or the picture may be otherwise distorted.
  When you play back a tape recorded in the LP mode, the picture may be in black and white. However, these are not malfunctions.

To Play Back a Recorded Part Repeatedly

Press the Play button ㉕ on the remote control for more than 5 seconds.
The "R" indication appears on the On Screen Display.
- If "OSD" is set to "OFF" (See page 35), the "R" indication will not appear in repeat playback mode.





Indication of the Repeat Playback mode

To Cancel the Repeat Playback Mode:
Press the Stop button ⑨.

To rewind the tape a little to view the same scene again
(Replay Function)

If you want to view the same scene again, for example because you could not catch clearly what a person said, simply press the REPLAY button ④, to rewind the tape a little from its present position and play it back again.
The direction in which the tape is rewound depends on what playback mode the VCR is in when you press the REPLAY button ④.
- If you press the REPLAY button ④ when the VCR is in the stop, rewind, fast-forward, slow playback, or standby (Off) mode, the Replay function does not work.

During Normal Playback, Cue Playback and Still Playback:
When you press the REPLAY button ④, the VCR switches over to the review playback mode for a few seconds and then resumes normal playback.

During Review Playback:
When you press the REPLAY button ④, the VCR briefly switches over to Cue playback and then plays back at normal speed in forward direction from the point where the REPLAY button ④ was pressed.

To Stop Playback Automatically
(Playback Off Timer Function)

If you set the playback duration, the playback will stop automatically.
After the set playback time has elapsed, the VCR automatically stops playback and switches off.

To Activate the Playback Off Timer Function:
During normal playback, press the Play button ㉕ on the VCR for more than 2 seconds to put the VCR in the Playback Off Timer mode.
After that, press the Play button ㉕ on the VCR repeatedly until the desired playback duration is displayed on the VCR display.

- Repeatedly pressing this button changes the indication in the following order:

Counter display (normal playback mode) → 30 (min.) → 60 (min.) → 120 (min.) → 180 (min.) → 240 (min.) → Counter display (normal playback mode)

To Stop Midway:
Press the Stop button ⑨.

To Play Back NTSC Video Cassettes on Your PAL TV
(Quasi-NTSC Playback Function)

This VCR allows playback of tapes recorded in the NTSC system on a normal PAL system TV with the same operations as usual.
On some TVs, however, the playback picture may roll up or down.
- If your TV has a V-HOLD control or equivalent adjustment function, use it to try to stop the picture movement.

Convenient Automatic Functions

VCR Auto Power On
When you insert a video cassette, the VCR switches on automatically.

Auto Playback Start
When you insert a video cassette with a broken erasure prevention tab, playback start automatically without having to press the Play button ㉕.

VCR-off Playback
When the VCR is off, an inserted cassette can be played back by pressing the Play button ㉕.

Auto Rewind
When the tape reaches the end, the VCR automatically rewinds it to the beginning.
- This function does not work during timer recording and OTR.

Automatic Switching Off and Ejection
When the VCR is switched off, and inserted cassette can be ejected simply by pressing the EJECT button ㊷. The VCR will eject the cassette and automatically turn itself off again.

VCR-off Search
When the VCR is off, the VCR starts intro-jet scan of an inserted cassette by pressing the SEARCH button ㉙.

To Eject the Video Cassette Using the Remote Controller

Keep pressing Stop button ⑨ for at least 3 seconds.

Preparations

- Confirm that the VCR is on.
- Confirm that the TV is on and the VCR viewing channel is selected.
- Set the VCR/TV switch ㉛ to "VCR".

Operations

1 **Insert a video cassette with an intact erasure prevention tab.**
- If it has already been inserted, press the VCR-ON/OFF button to turn the VCR on.

2 **Select the TV station using the Channel buttons ㉚.**
- It is also possible to select by pressing the numeric buttons ②.

VCR display

3 **Press REC (REC/OTR) button ㉖ ((51)) to start recording.**

4 **Press the Stop button ⑨ to stop recording.**

To Select the Desired Tape Speed

Press the SP/LP button ㉑ before recording.

- SP provides standard recording time and optimum picture quality.
  LP provides doubled recording time with slightly reduced picture quality.

To Pause Recording

Press the Pause/Slow button ⑦ during recording.
Press it again to continue recording.

To View One TV Programme while Recording Another TV Programme

After pressing the REC button ㉖ to start recording, select on your TV the programme position of the TV programme that you want to view.

Notes:

- When playing back an E300 cassette recorded in the LP mode, some picture distortion may occur. However, this is not a malfunction.
- The recording pause mode will be automatically cancelled after 5 minutes and return to the stop mode.

To Immediately Record the Same TV Programme That You Are Viewing on the TV (Direct TV Recording)

This function allows you to immediately start recording the same programme that you are viewing on the TV.
The programme position selected on the VCR automatically changes to that of the TV programme that you are viewing on the TV. When you stop the recording, the VCR automatically switches back to the previously selected programme position.

Conditions for correct operation of the Direct TV Recording function:

- Your TV must be equipped with the "Q Link" function.
- The VCR must be connected to the TV via a fully-wired 21-pin Scart cable.

To Perform Direct TV Recording:

1 Insert a video cassette with an intact erasure prevention tab.

2 Press the DIRECT TV REC button ⑥.
- Recording of the TV programme that you are viewing on the TV starts.
- In some cases, it may not be possible to change the programme position on the TV during Direct TV Recording.
- Do not press the AV LINK button ⑱ during Direct TV REC, otherwise the recording may not be performed correctly.

3 Press the Stop button ⑨. to stop recording.

To Display the Approximate Remaining Tape Time

The remaining tape time can be displayed in the VCR display.

1 Press the TAPE button ⑲ and select the corresponding cassette tape length.
See page 35.

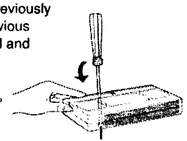
2 Press the OSD/DISPLAY button ⑤ repeatedly until the Remaining Tape Time appears on the VCR display.
- Pressing the OSD/DISPLAY button ⑤ once makes the On Screen Display appear; after that, pressing it repeatedly changes the indication in the following order:

→Clock→Counter
Remaining Tape Time←

For certain cassettes, the remaining tape time may not be displayed correctly.

To Prevent Accidental Erasure of Recorded Contents

When you record again onto a previously recorded video cassette, the previous recording is automatically erased and replaced with the new recording. Therefore, to prevent accidental erasure of the recorded contents, break out the erasure prevention tab after recording.

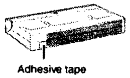


Erasure prevention tab

Use a screwdriver or similar tool to break out the tab.

To Record Again onto the Video Cassette with a Broken Out Erasure Prevention Tab:

If you insert a video cassette with a broken out erasure prevention tab and press the REC button ㉖, the "▭" indication flashes on the VCR display to indicate that recording is not possible.
In this case, cover the tab hole with two layers of adhesive tape.



Adhesive tape

The adhesive tape substitutes for the prevention erasure tab and makes it possible to record again on this cassette.

To Select the Recording Duration and Perform Timer Recording (OTR Recording)

OTR means One-Touch Recording and is called this way, because you can start recording and select the recording duration by repeatedly pressing a single button. This is very convenient, for example when you want to start recording immediately but need to go out or want to go to bed.
After the selected recording duration has elapsed, recording stops and the VCR automatically switches off.

To Perform an OTR Recording:

1 Display the VCR picture on the TV.

2 Insert a video cassette with an intact erasure prevention tab.

3 Press the Channel buttons ㉚ to select the programme position on which the TV programme to be recorded will be broadcast.

4 Press the REC/OTR button (51) to start recording

5 Press the REC/OTR button (51) repeatedly to select the desired recording duration.
- Every time you press this button, the recording duration indicated in the VCR display changes in the following order.
- For example, if you select "30", the VCR records a programme from that moment on for 30 minutes.

→Counter display (normal recording mode) → 30 (min.) → 60 (min.)
240 (min.) ← 180 (min.) ← 120 (min.) ←

To Stop the OTR Recording Before the End:
Press the Stop button ⑨.

Note:

- *This function also works during Direct TV Recording.*

Linked Timer Recordings with a Digital Receiver

When the AV2 socket of this VCR is connected by a 21-pin cable to a Digital Receiver, it is possible to have timer recordings for a Digital Receiver execute automatically simply by switching the Digital Receiver into timer standby mode and then switching this VCR into timer recording standby mode.

- **Note that linked timer recordings may not work properly with some Digital Receivers.**

1 Make sure that "AV2" is set to "TIMER".
(See page 36.)

2 Insert a video cassette with an intact erasure prevention tab into the VCR.

3 Switch the Digital Receiver over to the timer standby mode.

4 Press the TIMER REC button ⑳ to switch the VCR over to the timer recording standby mode.
- This VCR does not require any further special timer recording operations.
- The recording will start at the date and time programmed for the Digital Receiver.

Notes:

- Always connect the Digital Receiver to be used for timer recordings to the AV2 socket of this VCR using a 21-pin cable.
- Linked timer recordings are not counted in the total time of timer recording programmings.
- Make sure that the date and time of the linked timer recording does not conflict with that of a VCR. If programmed recordings do overlap, either linked timer recording or timer recording of VCR have the priority.

Timer Recording

This function lets you programme the VCR for unattended automatic recording of desired TV programmes when you are not at home or sleeping.
You can programme timer recordings in two different ways:

- By entering the necessary information with the remote control while viewing the On Screen Display (OSD) on the TV screen (explained below) or;
- By entering the ShowView number published alongside the TV programme listings in newspapers and magazines (see page 18).

This VCR lets you programme up to 8 TV programmes (including weekly and daily programmes) for unattended recording up to one month in advance.

To Programme with the On Screen Display (OSD)

This method offers easy step-by-step programming with the remote control while you view the prompts on the TV screen.

Preparations

- Confirm that the VCR is on.
- Confirm that the TV is on and the VCR viewing channel is selected.
- Insert a video cassette with an intact erasure prevention tab.
- Set the VCR/TV switch ㉛ to "VCR".

Example:
Programming the timer recording of a TV programme broadcast on programme position 2 (ZDF) from 20:00 to 21:30 on 27 October.

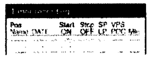
Follow the on screen operation guide.

Operations

01 **Press the PROG./CHECK button ⑫ to display the menu for programming timer recordings on the TV screen.**

- Alternatively, you can press the MENU button ㊱ and then select "Timer record".

On Screen Display



02 **Press the Channel buttons ⑩ to select the programme position of the desired TV station.**

- As an alternative method, after pressing the Channel button ⑩, you can use the Cursor buttons (▲▼◀) ㉝.

03 **Press the DATE button ⑪ to set the date on which the TV programme will be broadcast.**

04 **Press the ON button ㉓ to set the starting time.**

- When it is kept pressed, the indication changes in 30-minute intervals.

05 **Press the OFF button ㉒ to set the ending time.**

06 **Press the SP/LP button ㉑ to set the desired tape speed.**

- SP provides standard recording time and optimum picture quality.
  LP provides doubled recording time with slightly reduced picture quality.
  Regarding the "A" indication, refer to page 19.

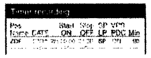
07 **Press the Cursor buttons (▲▼◀) ㉝ to set VPS/PDC to ON or OFF (– – –).**

- See page 19 for VPS/PDC recording.

08 **Press the TAPE button ⑲ to select the corresponding cassette tape length.**
(See page 35.)

09 **Press the OK button ㉟ to conclude the settings.**

- To programme additional timer recordings, repeat operation steps **2–9**.



10 **Press the TIMER REC button ⑳ to switch the VCR over to the timer recording standby mode.**

- Check that [⏲] is lit on the VCR display.
  If it is flashing, check the timer recording details again. (See page 20.)

To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button ⑳ so that the "⏲" indication on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button ⑳ again, otherwise the programmed timer recording will not be performed.

Note:

- If the VCR is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button ⑳ to put the VCR in the timer recording standby mode.

To Programme with the ShowView Function

The ShowView numbers assigned to each TV programme and published alongside the TV programme listings in newspapers and magazines make it extremely easy to set the VCR for timer recording.
The duration of a timer recording programmed with ShowView number may be slightly longer than the actual duration of the TV programme.

Preparations

- Confirm that the VCR is on.
- Confirm that the TV is on and the VCR viewing channel is selected.
- Insert a video cassette with an intact erasure prevention tab.
- Set the VCR/TV switch ㉛ to "VCR".

Example:
Programming a timer recording of a TV programme with the ShowView number 920126

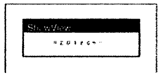
Operations

1 **Press the SHOW VIEW button ㉖ to display the menu for entering the ShowView number on the TV.**

2 **Press the Numeric buttons ❷ to enter the ShowView number.**

- If you have entered a wrong digit, press the Cursor button (◀) ㉝ and then enter the correct digit.

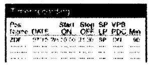
On Screen Display



3 **Press the OK button ㉟ to display the programmed content.**

4 **Press the SP/LP button ㉑ to set the desired tape speed.**

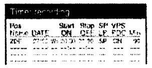
- SP provides standard recording time and optimum picture quality.
  LP provides doubled recording time with slightly reduced picture quality.
  Regarding the "A" indication, refer to page 19.
- To extend the ending time or to make any corrections, use the Cursor buttons (▲▼◀) ㉝, the Channel buttons ⑩, the DATE button ⑪, the ON button ㉓, the OFF button ㉒, the SP/LP button ㉑.
- See page 19 for VPS/PDC recording.



5 **Press the TAPE button ⑲ to select the corresponding cassette tape length.**
(See page 35.)

6 **Press the OK button ㉟ again to conclude the settings.**

- To programme additional timer recordings, repeat operation steps **1–6**.



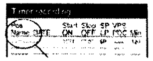
7 **Press the TIMER REC button ⑳ to switch the VCR over to the timer recording standby mode.**

- Check that "⏲" is lit on the VCR display.
  If it is flashing, check the timer recording details again. (See page 20.)

If "– –" Appears under "Pos/Name" after Entering a ShowView Number

Pos/Name stands for Programme Position/TV Station Name. Normally, the name of the TV station or the number of the programme position is displayed under "Pos/Name".
However, if the TV station information was not automatically set during Preset Download or Auto Setup due to adverse reception conditions, the "– –" indication appears instead.
In such a case, follow the operation steps below to correct it.

Press the Channel buttons ⑩ repeatedly to select the programme position on which the TV programme to be recorded will be broadcast.



"– –" indication

After you have entered the information of a TV station, it remains stored in the VCR's memory, and you do not need to enter it again in the future.

To Suspend the Timer Recording Standby Mode

When you want to use the VCR for playback, normal recording or some other operation before the programmed timer recording will be performed, you can temporarily suspend the timer recording standby mode by pressing the TIMER REC button ⑳ so that the "⏲" indication on the VCR display disappears.

However, after you have finished using the VCR, be sure to reactivate the timer recording standby mode by pressing the TIMER REC button ⑳ again, otherwise the programmed timer recording will not be performed.

Note:

- If the VCR is not put in the timer recording standby mode at the latest 10 minutes before the programmed timer recording starting time, the "⏲" indication flashes on the VCR display. In this case, press the TIMER REC button ⑳ to put the VCR in the timer recording standby mode.

Other Timer Recordings and Convenient Functions

Setting the Recording Date/Day(s)

Perform this operation in operation step **3** when programming a timer recording with the On Screen Display, or in operation step **4** when programming with the ShowView number. (See pages 17 and 18.)
You can select the recording date (day of the month/day of the week) by pressing the DATE button ⑪. If you repeatedly press the + side of the DATE button ⑪, the indication changes in the order shown below. If you press the – side of the DATE button ⑪, the indication changes in the opposite order.

- Programming a timer recording (setting the date) is possible up to one month ahead of the TV programme's broadcasting date and time. Daily and weekly timer recordings will continue until you cancel them.

→ <To Programme within 1 Month>
Example: 1 2 31
↓
<To Programme a Daily Timer Recording>
Example: Daily recording from Sunday to Saturday (Su-Sa).
Daily recording from Monday to Saturday (Mo-Sa).
Daily recording from Monday to Friday (Mo-Fr).
↓
<To Programme a Weekly Timer Recording >
Example: Weekly recording every Sunday
Weekly recording every Monday
⋮
Weekly recording every Saturday
(Su = Sunday, Mo = Monday, Tu = Tuesday,
We = Wednesday, Th = Thursday, Fr = Friday, Sa = Saturday)

Ensuring that a TV Programme Will Be Recorded until Its End (Auto SP/LP Change Function)

If, at the start of a timer recording, the VCR determines that the remaining tape time is insufficient to record the whole programme, the Auto SP/LP Change function automatically selects LP mode to ensure that the whole programme will be recorded. However, if the remaining tape time is still not sufficient even in the LP mode, the programme cannot be recorded to its end.

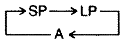
- If you programme a daily or weekly timer recording, recording will be performed in the LP mode from the start regardless of the remaining tape time.
- In case of a timer recording programmed with the VPS/PDC function, if the TV programme continues past the programmed ending time, the VCR automatically switches over to the LP mode at that moment. However, in some cases it may not be possible to record the programme until its end.
- Use a video cassette on which a few minutes more than the total length of programmed timer recordings remain, otherwise the programmed timer recordings may be performed in the LP mode.
- Be careful that the broadcast times of the TV programmes set for timer recording do not overlap, otherwise the programmed timer recordings may be performed in the LP mode.
- If the recording speed changes from SP to LP during a timer recording, some brief picture distortion occurs at that point.

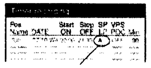
Condition for correct operation of the Auto SP/LP Change function:

- The tape length of the inserted cassette must be set correctly. (See page 35.)

To Activate the Auto SP/LP Change Function:
In operation step **6** when programming a timer recording with the On Screen Display (see page 17), or in operation step **4** when programming with the ShowView number (see page 18), press the SP/LP button ㉑ to select "A".

- When you press this button repeatedly, the indication changes in the following order:




Indication when "A" is selected

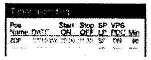
Setting for Control of the Recording Starting and Ending Time by Special Signal Included in the Broadcasting Signal (VPS/PDC Function)

VPS stands for Video Programme System.
PDC stands for Programme Delivery Control.
If a TV programme, for example a football game runs longer than scheduled, is shortened or starts earlier or later, this function synchronises the recording start and stop with the actual broadcasting start and stop of the TV programme.

Conditions for correct operation of the VPS/PDC function:

- "ON" must be displayed under "VPS/PDC" on the On Screen Display.
- The TV station must broadcast VPS/PDC signals.
- The programme starting time must be set correctly to the starting time listed in the newspaper/magazine.

To Activate the VPS/PDC Function:
In operation step **7** when programming a timer recording with the On Screen Display (see page 17), or in operation step **4** when programming with the ShowView number (see page 18), press the Cursor buttons (▲▼◄) ㉝ to make the ON indication appear.
See page 38 for details.



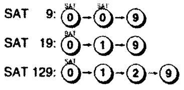
Programming a Timer Recording of a Satellite Programme

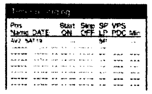
The programming of a timer recording of a satellite programme can be performed in the same way as for normal (terrestrial) TV programmes.
For the connection to a satellite receiver and the necessary settings, refer to pages 27 to 29.

Conditions for correct operation of this function:

- When selecting the programme position, be sure to use the Numeric buttons ② to select the satellite channel.

Example of selecting satellite programme positions 9, 19 and 129:





3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*1) on the enclosed list of compatible satellite receivers.

Notes for Programming a Timer Recording of a Satellite Programme:

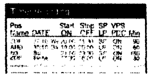
- When programming a timer recording of a satellite programme, it is not possible to activate the VPS/PDC function.
- On some satellite receivers, the power may be turned off for a few seconds before a timer recording is actually started and recording may not be performed for those first few seconds. To ensure recording from the beginning of the programme, we recommend that you set the recording start time about a minute earlier than that listed in the newspaper/magazine.
- After the timer recording has finished, some satellite receivers switch off automatically, but the recording has been performed as programmed.
- If a power failure occurs during the timer recording of a satellite programme, the timer recording may not resume when the power is restored.
- Timer recording of pay-per-view satellite programmes is not possible.
- Timer recording of satellite programmes from a satellite receiver or satellite receiver channel for which the PIN code has been entered is not possible.
- Timer recording of satellite programmes for which the parental control function has been activated is not possible.

To Check the Contents of Timer Recording Programmings

- Display the VCR picture on the TV.
- Set the VCR/TV switch ㉛ to "VCR".

1 Press the PROG./CHECK button ⑫ to display the timer recording programmings on the TV screen.
   - When the VCR is in the timer recording standby mode for a VPS/PDC recording, the On Screen Display may be distorted.

2 Press the EXIT button ㉞ to exit the On Screen Display.



To Change a Timer Recording Programming

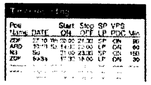
It is not possible to change a programming while the timer recording is being performed.

- Display the VCR picture on the TV.
- Set the VCR/TV switch ㉛ to "VCR".

1 Press the PROG./CHECK button ⑫ to display the timer recording programmings on the TV screen.

2 Press the Cursor buttons (▲▼) ㉝ to select the programming that you want to change.

3 Follow the operations below to change the programmed contents.
To change the broadcasting station:
Use the Channel buttons ⑩.
To change the date of the timer recording:
Use the DATE button ⑪.
To change the recording starting time:
Use the ON button ㉓.
To change the recording ending time:
Use the OFF button ㉒.
To change the recording speed:
Use the SP/LP button ㉑.



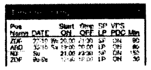
4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

To Cancel the Programming of a Timer Recording

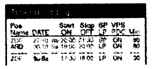
It is not possible to cancel a programming while the timer recording is being performed.

- Display the VCR picture on the TV.
- Set the VCR/TV switch ㉛ to "VCR".



1 Press the PROG./CHECK button ⑫ to display the timer recording programmings on the TV screen.

2 Press the Cursor buttons (▲▼) ㉝ to select the programming that you want to cancel.



3 Press the CANCEL button ⑭.

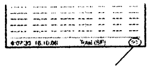
4 Press the EXIT button ㉞ to exit the On Screen Display.

Notes for Cancelling the Programming of a Timer Recording

In some cases, for example as listed below, the programming of a timer recording remains stored in the memory until 4 a.m. the next day. However, this is not a malfunction.

- When a timer recording was not performed up to the TV programme's ending time because the remaining tape time was not sufficient.
- When you have stopped the timer recording while it was being performed.

To Check the Total Timer Recording Programming Time



Indication for a total timer recording programming time of 90 minutes

The total time indication for timer recording programming lets you check how many programmes can be recorded by comparing with the remaining tape time in the VCR display.

- The total time is calculated in the SP mode.
- The total time cannot be calculated when setting Daily/Weekly timer recording.

To select a Timer-Recorded Programme from the List and Quickly Locate Its Beginning for Automatic Playback (Programme List Search)

This VCR can display a list of the timer-recorded programmes on the inserted video cassette on the TV screen. You can then select the desired programme, and the VCR will quickly locate its beginning and start playback.

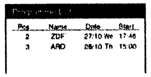
Conditions for correct operation of the Programme List Search function:

- The video cassette must not have been ejected after the timer recordings were performed.
- The tape length of the inserted cassette must be set correctly.
- The VCR must not be in the timer recording standby mode.
- A programme of at least 15 minutes must be recorded on the tape.
- If a timer recording was performed onto a recorded video cassette, the previous recording must have been completely erased by the new recording.

Preparation

- Display the VCR picture on the TV.

Opearations



Pos	Name	Date	Start
2	ZDF	27/10 We	17:46
3	ARD	28/10 Th	15:00

1 Press the SEARCH button ㉙ to display the Programme List menu.

2 Press the Cursor buttons (▲▼) ㉝ to select the programme that you want to locate and play back.

3 Press the SEARCH button ㉙ to start the search for the beginning of the selected programme.
   - After the desired recorded programme has been found, playback starts automatically.
   - If, after playback has started, you want to search for the beginning of the same or another programme, press the SEARCH button ㉙.
     Playback stops, and the Programme List menu appears.
     Repeat the above operations steps **2**—**3**.

To Cancel the Programme List Search:
Press the EXIT button ㉞.

Hints:

- When you press the SEARCH button ㉙ in the operation step **1**, the last timer-recorded programme is selected (highlighted).
- If you take out the cassette or insert another cassette after a timer recording has finished, pressing the SEARCH button ㉙ activates the Intro-Jet Scan instead of the Programme List Search. (Refer to page 22.)
- If you programme linked timer recordings, Programme List Search function does not work.

Search Functions

To Quickly Find the Beginning of a Desired Programme (VISS=VHS Index Search System)

This VCR automatically records special index signals on the tape every time a recording is started. The Index search function makes use of these index signals to let you find the beginning of a desired programme quickly and easily.

Index signals are automatically recorded in the following cases:

- When you start a recording by pressing the REC button ㉖, REC/OTR button (51) or DIRECT TV REC button ⑥.
- When a timer recording starts.
- When you press the REC button ㉖ on the remote control during recording.

Conditions for correct operation of the Index search function:

- The VCR must be in the stop mode or in the playback mode.
- Each programme recorded on the tape must be at least 5 minutes long.

Preparations

- Display the VCR picture on the TV.
- Insert a recorded video cassette.

Operation

1 Press the INDEX button ㉗ (that corresponds to the direction from the current tape position in which the desired programme is located on the tape) to start the index search. For example, if you want to search for the 2nd recorded programme in forward direction, press the INDEX ►►I button ㉗ twice.
   - The VCR fast-forwards or rewinds the tape and searches for the specified index signal (the beginning of the desired recorded programme).
     When it has been found, playback starts automatically.

To Cancel the Index Search or to Stop Playback:
Press the Stop button ⑨.

Hints:

- Searching in either direction is possible up to the 20th index signal.
- If you press either of the INDEX buttons ㉗ too many times, simply press the other INDEX button ㉗ (indicating the opposite direction) to correct it. In this way, you can reduce the displayed figure down to 1.
- The figure on the VCR display decreases by 1 every time an index signal is located.

To Search for a Desired Programme While Checking the Recorded Contents on a Cassette (Intro-Jet Scan)

This VCR automatically records special index signals on the tape every time a recording starts. The Intro-Jet Scan function makes use of these index signals to play back the beginning of each programme recorded on the cassette one after another at high speed. This lets you quickly and easily check the contents of a cassette and find a desired programme.

Index signals are automatically recorded in the following cases:

- When you start a recording by pressing the REC button ㉖, REC/OTR button (51) or DIRECT TV REC button ⑥.
- When a timer recording starts.
- When you press the REC button ㉖ on the remote control during recording.

Conditions for correct operation of the Intro-Jet Scan function:

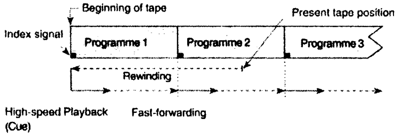
- The cassette must have been ejected after the timer recordings were performed.
- VCR must be switched on, be in the playback mode or be in the standby mode.
- Each programme recorded on the tape must be at least 15 minutes long.

Preparations

- Display the VCR picture on the TV.
- Insert a recorded video cassette.

Operations

1 Press the SEARCH button ㉙ to start the Intro-Jet Scan.
   - After rewinding the tape to the beginning, the VCR plays it back at high speed for approximately 10 seconds. It then fast-forwards the tape to the next tape position marked by an index signal (beginning of a programme), and every time an index signal is found, the VCR switches over to high-speed playback (Cue) for about 10 seconds.



2 When you have found the programme that you want to view, press the Play button ㉕ to start normal playback.

To Cancel the Intro-Jet Scan or to Stop Playback:
Press the Stop button ⑨.

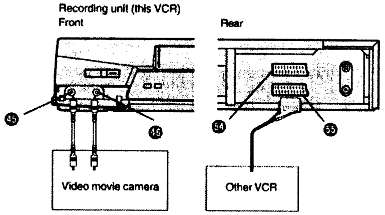
Note:

- If you press the SEARCH button ㉙ after a timer recording has finished, but before ejecting that cassette, the Programme List Search (for details, see page 21) will be activated instead of the Intro-Jet Scan.

Editing

Assemble Editing

The assemble editing function makes it easy to record the picture and sound of virtually any number of scenes or programmes in succession.
Assemble editing from an external source, for example from a video movie camera, can be performed in the same way.



Preparations

- Connect a video movie camera or a VCR to this VCR with an audio/video cable or a 21-pin Scart cable, as shown in the illustration.
- Display the VCR picture on the TV.
- Insert the cassette on which the assemble editing is to be performed, and make sure that its erasure prevention tab is not broken out.
- Set the VCR/TV switch ㉛ to "VCR".
- Press the INPUT SELECT button ❸ to select the AV Input (external input) "A1", "A2" or "A3" according to the socket(s) on the VCR to which the source unit has been connected.

A1: When connected to the AV1 21-pin Scart socket (54)
A2: When connected to the AV2 21-pin Scart socket (55)
- Make sure that "AV2" is set to "EXT". (See page 36.)

A3: When connected to the Video Input socket ㊺ and Audio Input socket ㊻ on the front panel of the this VCR

Operations

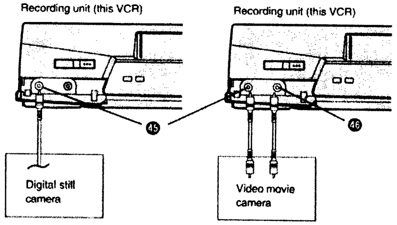
1. Press the Play button ㉕ to start playback.
2. At the point where you want to join a new scene, press the Pause/Slow button ❼ to put it in the still playback mode.
3. Press the REC button ㉖ to put it in the recording pause mode.
4. Start playback on the source unit and search for the point from which you want to record (copy) onto this VCR.
5. When that point is reached, press the Pause/Slow button ❼ again to start recording the new picture and sound from the playback unit.
6. To record (copy) additional scenes, press the Pause/Slow button ❼ to put this VCR in the recording pause mode and then perform steps **4** and **5** again.
7. At the point where you want to stop recording, press the Stop button ❾ to finish recording.

Note:

- If you leave the VCR in the recording pause mode for more than 5 minutes in step **3** or **6**, the VCR automatically switches over to the stop mode to protect the video heads.

Album Function

The album function lets you collect desired scenes (both moving and still pictures) and create the equivalent of a photo album, but on video cassette. The pictures can be copied onto the cassette from a video movie camera, a digital still camera or another VCR for any desired time that you can preset.

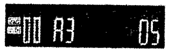


Preparations

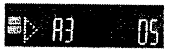
- Connect a digital still camera, a video movie camera or another external source to the Video Input socket ㊺ and Audio Input sockets ㊻ on the front panel of this VCR.
- Display the VCR picture on the TV.
- Insert a cassette with intact erasure prevention tab.

Operations

1. Press the STILL ALBUM button ⓰ on the remote control to put the VCR in the recording pause mode.

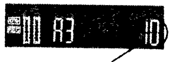


   - The VCR automatically selects the AV Input (external input) "A3" and then switches over to the recording pause mode. The figure for the preset recording time (seconds) appears on the VCR display. The initial setting is "05" (5 seconds).
2. Start playback on the source unit to search for the point from which you want to copy onto this VCR.
3. When that point is reached, press the STILL ALBUM button ⓰ on the remote control of this VCR again to start recording.



   The VCR records the picture (and sound) for 5 seconds and then automatically switches over to the recording pause mode.
4. Repeat above steps **2** and **3** to record other scenes in succession.
5. When you have recorded all desired scenes, press the Stop button ❾ to finish recording.

To Change the Recording Time:
After step **1** or **3**, press the INDEX ►►I or INDEX I◄◄ button ㉗ to change the recording time. You can set any time between "3" and "20" seconds.



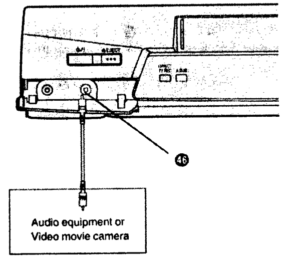
Indication when the recording time is set to "10"

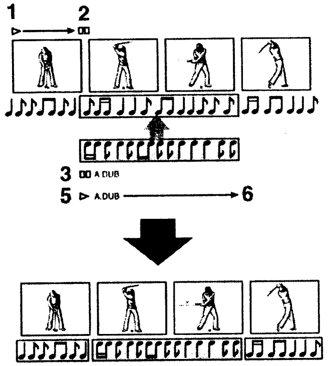
Hints:

- If you connect a digital still camera, use a camera equipped with the video output socket. Use the cable supplied with the still camera to connect it. For details, also read the operating instructions of the equipment to be connected.
- If you leave the VCR in the recording pause mode for more than 5 minutes in step **1** or **3**, the VCR automatically switches over to the stop mode to protect the video heads. In this case, press the STILL ALBUM button ⓰ again to put the VCR in the recording pause mode again.
- If you want to add background music or narration to the scenes recorded with the album function, perform Audio Dubbing as explained on the next page.
- Depending on the output system of the digital still camera, the pictures may not be recorded correctly.

Audio Dubbing

This function lets you insert narration, background music or special sound effects in previously made recordings. However, this automatically erases the original sound in the tape portions, on which you perform audio dubbing.





Preparations

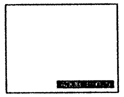
- Connect the audio equipment or a video movie camera to this VCR with an audio cable.
- Display the VCR picture on the TV.
- Insert the cassette on which the audio dubbing is to be performed, and make sure that its erasure prevention tab is not broken out.
- Press the INPUT SELECT button ③ to select the AV Input (external input) "A1", "A2" or "A3" according to the socket(s) on the VCR to which you have connected the source unit.
  - A1: When connected to the AV1 21-pin Scart socket (54)
  - A2: When connected to the AV2 21-pin Scart socket (55)
    - Make sure that "AV2" is set to "EXT". (See page 36.)
  - A3: When connected to the Audio Input socket ㊻ on the front panel of this VCR

Operations

1 Press the Play button ㉕ on this VCR to start playback to search for the point from which you want to start audio dubbing.

2 At the point from which you want to perform audio dubbing, press the Pause/Still button (52) on this VCR to put it in the still playback mode.

3 Press the A.DUB button ㊼ on this VCR to put it in the recording pause mode.



4 Start playback on the source unit so that you can hear the sound.

5 When you reach the point from which you want to start audio dubbing, press the Pause/Still button (52) on this VCR again to start recording the new sound or start your narration.

6 At the point where you want to stop audio dubbing, press the Stop button ⑨ to finish recording.

Hint:

- For audio dubbing with narration, you can use the built-in microphone of the connected video movie camera.

Connecting the VCR to a Decoder

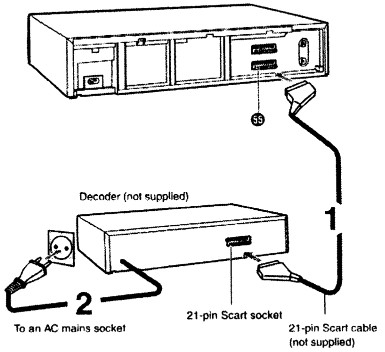
To connect this VCR to a decoder, make the connections shown in the illustration below.
For the connection to the TV, see pages 8 and 10.

For details about the connection, also read the operating instructions of the decoder.

Be sure to keep the VCR, TV and decoder switched off until you have finished all connections.
For your safety, do not connect or handle the equipment with wet hands.

To Connect the VCR to a Decoder

Decoder here refers to the device used to decode scrambled broadcasts (Pay TV).



1 Connect a 21-pin Scart cable (not supplied) to the AV2 21-pin Scart socket (55) on the VCR and to the 21-pin Scart socket on the decoder.

2 Connect the decoder's mains lead to an AC mains socket.

3 Set "AV2" to "DECODER".
For details, see page 36.

AV Link Function

If the VCR is connected to the TV via a 21-pin Scart cable, you can use AV LINK button ⑱ to switch the TV from normal TV reception over to the video playback channel (AV input) (and vice versa). In the VCR mode (when the VCR indication in the VCR display is lit), the TV is switched to the video playback channel (AV input). In the TV mode (when the VCR indication is not lit), the TV is switched to TV reception.

	VCR	TV
VCR Mode	VCR indication is lit.	AV Input is selected.
TV Mode	VCR indication is not lit.	TV reception is selected.

- When you press the MENU button ㊱ to display the menu on the TV screen, the TV is also automatically switched to the VCR mode, however, the VCR indication does not appear in this case.
- When you start playback on the VCR, the TV is automatically switched to the VCR mode. However, during playback, it is not possible to switch the TV back to the TV mode.
- If a Pay TV station has been selected on the VCR when you switch to the TV mode, the picture on the TV is scrambled when you select a Pay TV station on the TV. In this case, either switch to the VCR mode or select the AV input on the TV.

Hint:

- "RGB" means separate Red/Green/Blue colour signals. If you connect a TV equipped with RGB input capability to the AV1 socket (54) on this VCR, and a decoder equipped with RGB output capability to the AV2 socket (55), the TV can receive RGB signal input from the decoder via the VCR.

Connecting the VCR to a Satellite Receiver or Digital Receiver

Satellite receiver here includes a digital receiver.

The connection method differs depending on the type of your satellite receiver.

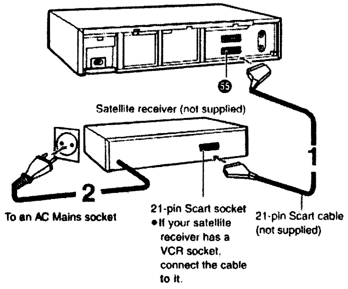
For details about the connection, also read the satellite receiver's operating instructions.

If the Satellite Receiver is Equipped with a 21-pin Scart Socket

If your satellite receiver is equipped with a 21-pin Scart socket, use a 21-pin Scart cable to connect the VCR.

For the connection to the TV, refer to pages 8 and 10.

Be sure to keep the VCR, TV and satellite receiver switched off until you have finished all connections.
For your safety, do not connect or handle the equipment with wet hands.


(55)
Satellite receiver (not supplied)
1
2
To an AC Mains socket
21-pin Scart socket
• If your satellite receiver has a VCR socket, connect the cable to it.
21-pin Scart cable (not supplied)

1 Connect a 21-pin Scart cable (not supplied) to the AV2 21-pin Scart socket (55) on the VCR and to the 21-pin Scart socket on the satellite receiver.

2 Connect the satellite receiver's mains lead to an AC mains socket.

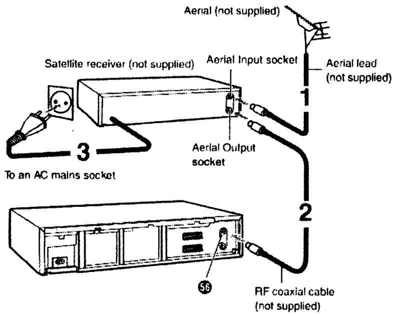
3 Set "AV2" to "EXT" or "TIMER".
For details, see page 36.

If the Satellite Receiver Is Not Equipped with a 21-Pin Scart Socket

In case your satellite receiver is not equipped with a 21-pin Scart socket, use the RF coaxial cable to connect it to the VCR.

For the connection to the TV, refer to pages 8 and 10.

Be sure to keep the VCR, TV and satellite receiver switched off until you have finished all connections.
For your safety, do not connect or handle the equipment with wet hands.


Aerial (not supplied)
Satellite receiver (not supplied)
Aerial Input socket
Aerial lead (not supplied)
1
3
Aerial Output socket
To an AC mains socket
2
(56)
RF coaxial cable (not supplied)

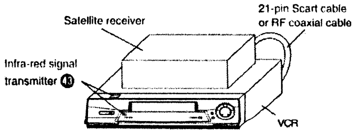
1 Connect the aerial lead to the Aerial Input socket on the satellite receiver.

2 Connect the RF coaxial cable to the Aerial Output socket on the satellite receiver and to the Aerial Input socket (56) on the VCR.

3 Connect the satellite receiver's mains lead to an AC mains socket.

Hint:
- The RF output channel of the satellite receiver should be adjusted away from channel 36, which is used by the VCR, e.g. re-adjust to channel 33.

Note:
How to install the satellite receiver
Carefully observe the following points so that you can control the satellite receiver from the VCR.
1 Place the satellite receiver on top of the VCR.
2 Move the satellite receiver back a few centimetres so that infra-red signals emitted from the top of the VCR's front panel can be received by the satellite receiver.


Satellite receiver
21-pin Scart cable or RF coaxial cable
Infra-red signal transmitter ㊸
VCR

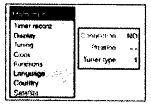
To Prepare the VCR for Remote-controlled Operation of the Satellite Receiver (Setting the Tuner Type)

This VCR lets you change the programme position on the satellite receiver and programme timer recordings of satellite programmes – all with this VCR's remote control. This is called "satellite control".
To enable the VCR to control the satellite receiver, you need to set the tuner type of your satellite receiver. You can find the tuner type numbers on the enclosed list of compatible satellite receivers. However, if your satellite receiver is not included in this list, it cannot be remote-controlled via this VCR.

Preparation
- Set the VCR/TV switch ㉛ to "VCR".

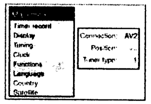
Operations

1 Press the MENU button ㊱ to display the Main menu on the TV screen.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Connection NO
Position --
Tuner type 1

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Satellite", "Connection" and "NO" in this order.

3 Press the Cursor buttons (▲▼) ㉝ to select the type of connection according to the type of socket on the VCR to which the satellite receiver is connected.

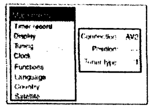

Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Connection AV2
Position --
Tuner type 1

NO: When the satellite receiver is not connected to the VCR
RF: When the satellite receiver is connected to the VCR's Aerial Input socket
AV1: When the satellite receiver is connected to the VCR's AV1 21-pin Scart socket
AV2: When the satellite receiver is connected to the VCR's AV2 21-pin Scart socket

4 Press the OK button ㉟.

5 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuner type" and "1" in this order.

6 Find your receiver in the enclosed list of compatible satellite receivers and enter its tuner type number by pressing the Numeric buttons ②.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Connection AV2
Position --
Tuner type 1

7 Press the OK button ㉟ to conclude the setting.

8 Press the EXIT button ㉞ to exit the On Screen Display.

Hint:
- If you select "RF" in step **3**, "Satellite - Position" is set automatically and it is not possible to change the satellite programme position here. If you want to change it, refer to page 30.

Note:
- If your satellite receiver is not included in the list of compatible satellite receivers, this VCR cannot control it.

To Prepare the Satellite Receiver

To make it possible for the VCR to control the satellite receiver, the satellite receiver must be left in a certain condition. This condition is called standby type, and it differs depending on the make and model of satellite receiver. There are five standby types (A, B, C, D, E) as listed below.
Find your satellite receiver in the enclosed list of compatible satellite receivers and note its standby type. Then look up this standby type in the chart below and determine which action(s) you need to take to prepare your satellite receiver so that this VCR can control it.

Standby Type / Action	A	B	C	D	E
1	Yes	No	Yes	Yes	Yes
2	No	No	No	Yes	Yes
3	No	No	Yes	No	Yes

Action 1: Switch the satellite receiver on.
Action 2: Twin-tuner type satellite receiver: Select on the tuner which is connected to the VCR.
(Please also refer to the satellite receiver's operating instructions.)
Action 3: Switch the satellite receiver's channel display to the 2-digit display mode.

To Check that the Satellite Channels Can Be Selected Correctly

Preparation

- Set the VCR/TV switch ㉛ to "VCR".

Operations

1 Press the Numeric buttons ❷ to select the satellite channel.

Example:
To select "SAT 9": Enter ⓪ – ⓪ – ⑨.
To select "SAT 19": Enter ⓪ – ① – ⑨.
To select "SAT 129": Enter ⓪ – ① – ② – ⑨.

3-digit programme positions can be selected with this remote control only in case of a satellite receiver that is marked with (*1) on the enclosed list of compatible satellite receivers.

2 Check that the channel on the satellite receiver has been changed to the channel that you selected.

Notes:

- After you have finished all settings and preparations, use the VCR's remote control to check that the satellite programmes can be selected correctly and timer recordings of satellite broadcast can be performed correctly.
- With some satellite receivers, correct control from the VCR may not be possible.
- There may be a slight delay between pressing the Numeric buttons ❷ on the remote control and the changing of the channel on the satellite receiver. This is due to the need for signal conversion.
- The range of satellite channels available for selection is 1 through 99.
- Some satellite receivers offer less than 99 channels. In this case, the number of the satellite channels that can be controlled from the VCR is the same.
- Some satellite receivers offer more than 99 satellite channels, but even in this case, only the satellite channels 1 through 99 can be controlled from the VCR.
- With some satellite receivers, it is necessary to wait a few seconds between selecting one channel and selecting another one with the remote control of the VCR.
- If the display on the satellite receiver does not indicate the channels, refer to its operating instructions and follow the procedure for displaying the channels.

Tuning and Assigning the TV Stations Available in Your Area to the Programme Positions (Manual Tuning)

This VCR has 99 programme positions that can be preset to receive TV stations.
Usually, if you switch the VCR on for the first time after making the necessary connections, the VCR will start the Download or Auto Setup function automatically so that all available TV stations in the area can be received.
However, if Auto Setup is not successful due to extraordinary transmission circumstances, or if you want to change the name of a TV station or change a TV station from its regular programme position to one of your preference, you can set it up manually. This is called Manual Tuning.

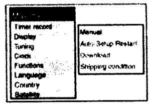
If Download from the TV occurs after you have performed Manual Tuning, the manually performed tuning may be cancelled.
In that case, perform Manual Tuning again.

Preparation

- Set the VCR/TV switch ㉛ to "VCR".

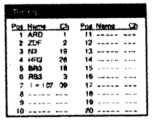
To Change the Order in Which the TV Stations Are Assigned to the Programme Positions

1 Press the MENU button ㊱ to display the Main menu on the TV screen.



2 Press the Cursor buttons (▲▼◄) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.

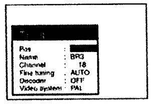


Pos	Name	Ch	Pos	Name	Ch
1	ARD	1	11	-----	---
2	ZDF	2	12	-----	---
3	N3	19	13	-----	---
4	HR3	28	14	-----	---
5	BR3	18	15	-----	---
6	RB3	3	16	-----	---
7	[illegible]	39	17	-----	---
8	-----	---	18	-----	---
9	-----	---	19	-----	---
10	-----	---	20	-----	---

4 Press the Cursor buttons (▲▼) ㉝ to select the TV station that you want to assign to a different programme position.

5 Press the OK button ㉟ to display the Manual Tuning menu.

6 Press the Cursor buttons (▲▼◄) ㉝ to select the entry field for "Pos".



Pos :
Name : BR3
Channel : 18
Fine tuning : AUTO
Decoder : OFF
Video System : PAL

7 Press the Numeric buttons ❷ to enter the number of the desired programme position.

8 Press the OK button ㉟ to conclude the setting.

9 Press the EXIT button ㉞ to exit the On Screen Display.

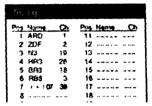
To Enter or Change the Name of a TV Station

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.

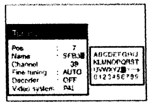
4 Press the Cursor buttons (▲▼◄) ㉝ to select a programme position whose TV station name is indicated as ✱□□□□.



Pos	Name	Ch	Pos	Name	Ch
1	ARD	1	11	-----	---
2	ZDF	2	12	-----	---
3	N3	19	13	-----	---
4	HR3	28	14	-----	---
5	BR3	18	15	-----	---
6	RB3	3	16	-----	---
7	[illegible]	39	17	-----	---
8	-----	---	18	-----	---

5 Press the OK button ㉟ to display the Manual Tuning menu.

6 Press the Cursor buttons (▲▼◄) ㉝ to select the entry field for "Name".
- The character list appears.



Pos : 7
Name : SFB3
Channel : 39
Fine tuning : AUTO
Decoder : OFF
Video system : PAL

7 Use the Cursor buttons (▲▼◄) ㉝ and OK button ㉟ to enter the station name.
- If the station name needs a blank space, select the blank between "Z" and "✱".

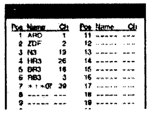
8 Press the EXIT button ㉞ to exit the On Screen Display.

To Enter Newly Available TV Stations

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

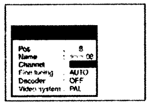
2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.



4 Press the Cursor buttons (▲▼◀) ㉝ to select an unused programme position.

5 Press the OK button ㉟ to display the Manual Tuning menu.



6 Press the Numeric buttons ② to enter the channel number of the desired TV station.
- Wait a few moments until the desired TV station has been tuned.

7 Press the OK button ㉟ to conclude the setting.

8 Press the EXIT button ㉞ to exit the On Screen Display.

To Change the Channel Number of an Already Tuned TV Station:
You can change it in the same way as explained above. However, in step **4** select the programme position of the TV station that you want to change to another channel number, and after pressing the OK button ㉟ in step **5**, use the Cursor buttons (▲▼◀) ㉝ to select the entry field for "Channel".

List of TV Reception Channels

Channel Indication	TV Channel Germany/Italy	Other Countries
2–12	*E2–E12	E2–E12
13–20	A–H (Only Italy)	—
21–69	21–69	21–69
74–78	S01–S05	S1–S5
80–82	S1–S3	M1–M3
83–89	S4–S10	M4–M10
90–99	S11–S20	U1–U10
121–141 Hyperband	**S21–S41	S21–S41

* In Italy: H1...(11), H2...(12)
** Only for 8 MHz channel raster

To Obtain the Best Tuning Condition

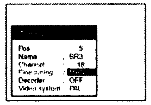
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.

4 Press the Cursor buttons (▲▼◀) ㉝ to select the TV station for which you want to obtain the best tuning condition.

5 Press the OK button ㉟ to display the Manual Tuning menu.



6 Press the Cursor buttons (▲▼◀) ㉝ to select the entry field for "Fine tuning".

7 Press the Cursor buttons (▲▼) ㉝ to obtain the best tuning condition.
- If you do not want to change the tuning condition, press the Cursor button ( ) ㉝ to return to the original condition (AUTO).

8 Press the OK button ㉟ to conclude the setting.

9 Press the EXIT button ㉞ to exit the On Screen Display.

To Preset Pay TV Stations

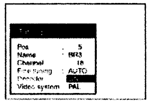
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.

4 Press the Cursor buttons (▲▼◀) ㉝ to select the pay TV station.

5 Press the OK button ㉟ to display the Manual Tuning menu.



6 Press the Cursor buttons (▲▼◀) ㉝ to select the entry field for "Decoder".

7 Press the Cursor buttons (▲▼) ㉝ to select "ON".

ON: To preset pay TV stations.
OFF: To preset normal TV stations.

8 Press the OK button ㉟ to conclude the setting.

9 Press the EXIT button ㉞ to exit the On Screen Display.

To Change the Type of Video System (Colour TV system)

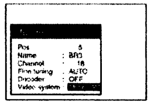
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.

4 Press the Cursor buttons (▲▼◀) ㉝ to select the TV station for which you want to change the type of video system.

5 Press the OK button ㉟ to display the Manual Tuning menu.



6 Press the Cursor buttons (▲▼◀) ㉝ to select the entry field for "Video system".

7 Press the Cursor buttons (▲▼) ㉝ to change the type of video system "PAL" or "MESECAM".

PAL: For receiving PAL signals.
MESECAM: For receiving SECAM signals.

8 Press the OK button ㉟ to conclude the setting.

9 Press the EXIT button ㉞ to exit the On Screen Display.

To Facilitate the Following Operations with the Instruction Indications on the On Screen Display

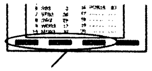
- To delete a programme position
- To insert a blank programme position
- To move a TV station to another programme position

Use the coloured instruction indications displayed below the list of tuned TV stations and the corresponding coloured buttons.
If downloading of the setup data has been performed, only the instruction indication "Delete" appears.

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Manual" in this order.

3 Press the OK button ㉟ to display the list of tuned TV stations.


Indications for Delete, Add and Move

4 Press the Cursor buttons (▲▼◀) ㉝ to select the desired TV station.

5 Follow the operations below.
To delete a programme position (Delete):
Press the Channel button (⋀, red) ⑩.
To insert a blank programme position (Add):
Press the DATE button (+, green) ⑪.
To move a TV station to another programme position (Move):
Press the ON button (+, yellow) ㉓,
and then use the Cursor buttons (▲▼) ㉝
to select the new programme position to which you want to assign the TV station.

6 Press the OK button ㉟ to conclude the setting.

7 Press the EXIT button ㉞ to exit the On Screen Display.

Hint:
- If you have performed Manual Tuning to enter TV stations, the "– –" indication may appear under "Pos/Name" on the On Screen Display when programming a ShowView timer recording.

Restarting the Auto Setup or Download/ Resetting the VCR to the Shipping Condition

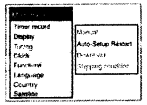
Performing Auto Setup or Download automatically tunes all TV stations available in your area for the VCR.
Restarting this function is convenient when you move to another area and may need to set up the VCR again.

To Restart the Auto Setup

To perform the Auto Setup again, follow the operation steps below.

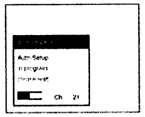
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Auto-Setup Restart" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Manual
Auto-Setup Restart
Download
Shipping condition

3 Press the OK button ㉟ to prepare for Auto Setup start.

4 Press the OK button ㉟ again to actually start the Auto Setup.

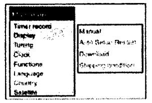

Auto Setup
in progress
please wait
Ch 21

To Restart the Download

To perform the Download again, follow the operation steps below.

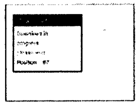
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Download" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Manual
Auto-Setup Restart
Download
Shipping condition

3 Press the OK button ㉟ to prepare for Download start.

4 Press the OK button ㉟ again to actually start the Download.


Download in
progress
please wait
Position 67

To Return the VCR to the Shipping Condition

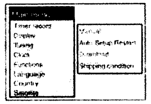
If you want to reset the VCR to the factory preset condition, follow the operation steps below.

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◀) ㉝ to select "Tuning" and "Shipping condition" in this order.

3 Press the OK button ㉟ to prepare for resetting the VCR to the shipping condition.

4 Press the OK button ㉟ two more times to actually change the settings back to the shipping condition.
- To re-tune the VCR, disconnect and reconnect the AC Mains Cable.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Manual
Auto-Setup Restart
Download
Shipping condition

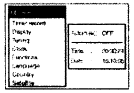
Setting the VCR's Clock

Usually, the VCR's Auto Setup or Download function automatically adjusts the clock to the correct time.
Under some reception conditions, however, the VCR cannot set the clock automatically
In this case, follow the operation steps below to manually set the clock.

To Manually Adjust the Clock

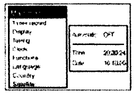
1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼) ㉝ to select "Clock".
- The Clock setting menu appears on the TV.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Automatic OFF
Time
Date

3 Use the Cursor button ( ) ㉝ to move to the Clock setting menu, confirm that "Automatic" is set to "OFF", and then press the OK button ㉟.

4 Use the Cursor buttons (▲▼◀) ㉝ to set the date and time.
- Instead of the Cursor buttons (▲▼◀) ㉝, you can also use the Numeric buttons ❷ to set the date and time. (Set the VCR/TV switch ㉛ to "VCR".)


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Automatic OFF
Time 20:30:24
Date

5 Press the OK button ㉟ to conclude the setting.

6 Press the EXIT button ㉞ to exit the On Screen Display.

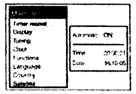
To Activate the Automatic Time Correction Function

If a TV station transmits a signal for time setting, performing the operation steps below activates the Automatic time correction function and the time is corrected automatically.

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼) ㉝ to select "Clock".
- The Clock setting menu appears on the TV.

3 Use the Cursor button ( ) ㉝ to move to the Clock setting menu, and then use the Cursor buttons (▲▼) ㉝ to set "Automatic" to "ON".


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Automatic ON
Time
Date

4 Press the OK button ㉟ to conclude the setting.
- Under adverse reception conditions, etc., the Automatic time correction function may not work. In this case, the indication for "Automatic" is automatically reset to "OFF".
  If the reception conditions improve later on, it may be possible to activate this function.

5 Press the EXIT button ㉞ to exit the On Screen Display.

Hints:
- If "Automatic" is set to "ON" when you open the Clock screen, do not set it to "OFF", otherwise, the automatic time correcting function is deactivated.
- The built-in clock employs the 24-hour system.
- In case of a power failure, an automatic back-up system automatically maintains the operation of the clock for at least 60 minutes.
- When "Automatic" on the Clock setting menu is set to "ON", the automatic time correction function checks and if necessary adjusts the time several times every day.
  The automatic time correction function only works when the VCR is switched off; it does not work in the timer recording standby mode.
- If "Automatic" is set to "OFF" and "Power save" to "ON" (see page 36), the time may not be maintained correctly. In this case, manually adjust the clock.
- If "Automatic" is set to "ON" and "Power save" to "ON", the Automatic time correction function does not work while the VCR is turned off. However, as soon as it is turned on, the Automatic time correction function is activated and the clock is set correctly.

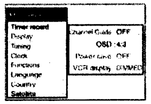
Other Convenient Functions

(Various Settings)

Settings for the Main Menu Item "Display"

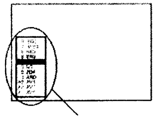
For Automatic Display of the Channel Guide on the TV Screen Each Time You Change the Programme Position

1 Press the MENU button ㊱ to display the Main menu on the TV screen.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Channel Guide OFF
OSD 4:3
Power save OFF
VCR display DIMMED

2 Press the Cursor button (▲▼◄) ㉝ to select "Display", "Channel Guide" and the entry field for "Channel Guide" in this order.

3 Press the Cursor buttons (▲▼) ㉝ to select "ON".
- Each time you change the programme position with the Channel buttons ㉚, the Channel Guide indication appears for a few seconds.
  Set the VCR/TV switch ㉛ to "VCR".

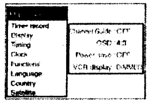

Channel Guide indication

4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

For Automatic Display on the TV Screen of the TV Station Information, etc.

1 Press the MENU button ㊱ to display the Main menu on the TV screen.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Channel Guide OFF
OSD 4:3
Power save OFF
VCR display DIMMED

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Display", "OSD" and the entry field for "OSD" in this order.

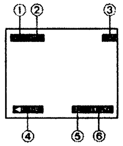
3 Press the Cursor buttons (▲▼) ㉝ to select "4:3", "OFF" or "16:9".
Normally set to "4:3".
- When using wide type of TV screen and selecting the wide screen mode on the TV setting, indications do not appear.
  Therefore, set to "16:9".
- Even if setting to "16:9", indications may be cut off depending on the TV.

OFF: No indicators appear.

4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

Indications that Can Be Displayed on the TV Screen with This Function:
At a press of the OSD/DISPLAY button ❺, the following indications appear on the TV screen.



① **TV station name**

② **Video system (colour TV system)**

③ **Tape speed indicator**

④ **Tape length indicator**
At each press of the TAPE button ⓳, the selected tape length is indicated.
◄E-180: For E30, -60, -90, -120 and -180 tapes
E-195: For E195 tape
E-240: For E240 tape
E-260 : For E260 and -300 tapes
- Even if you have selected the correct tape length, the remaining tape time may not be indicated correctly with certain kinds of cassettes.

⑤ **Tape running display**

Stop	□
Rewind	◄◄
Fast Forward	►►
Playback	▷
Recording	●
Recording pause	00
Repeat Playback	R
Audio Dubbing	ADUB

⑥ **Present time/Tape counter/Remaining tape time/Index Search/One-Touch Recording (OTR) /Playback Off Timer Function**

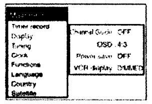
Present time	17:24:31
Tape counter	−2:35.47
Remaining tape time	REMAIN: 2:34
Index Search	►► 02
One-Touch Recording (OTR)	OTR 60
Playback Off Timer Function	30

Notes:
- If "OSD" is set to "OFF", none of the above indications appear.
- None of the above indications appear during special playback.
- During playback and when the AV input for the external source is selected, indications ① and ② do not appear.
- Some of the above indications do not appear when using NTSC tapes.

For Reduced the VCR's Power Consumption When the VCR Is Switched Off

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Display", "Power save" and the entry field for "Power save" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Channel Guide OFF
OSD 4:3
Power save OFF
VCR display DIMMED

3 Press the Cursor buttons (▲▼) ㉝ to select "ON" or "OFF".

ON: In this setting, the power consumption is greatly minimised when the VCR is turned off (Standby mode). In this case, the following happens:
- The item "VCR display" is automatically set to "OFF".
- To turn the VCR on, keep the VCR-ON/OFF button ❶ pressed on the VCR main unit. It is not possible to turn it on with the remote control.
- The Power save function works only when the VCR is turned off (Standby mode). It does not operate in the timer recording standby mode. After all programmed timer recordings have been made, and after all programmed data have been erased, the VCR switches over to the Power save mode.
- When the VCR is off, Pay TV programmes cannot be watched on the TV because the signal from the connected decoder is not looped through. To watch them, turn on the VCR.

OFF: In this setting, the power consumption is not reduced when the VCR is turned off (Standby mode).

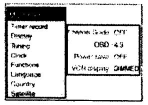
4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

For Automatic Change of the Brightness of the VCR Display When the VCR Is Switched Off

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Display", "VCR display" and the entry field for "VCR display" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
Channel Guide OFF
OSD 4:3
Power save OFF
VCR display DIMMED

3 Press the Cursor buttons (▲▼) ㉝ to select the desired condition.
- When the VCR is switched off, the brightness of the VCR display is as follows:

ON:	Indications are brightly lit.
OFF:	Indications are not lit.
DIMMED:	Indications are dimly lit.

4 Press the OK button ㉟ to conclude the setting.

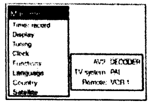
5 Press the EXIT button ㉞ to exit the On Screen Display.

Settings for the Main Menu Item "Functions"

To Set the Type of External Source Equipment that Is Connected to the AV2 21-pin Scart Socket

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Functions", "AV2" and "DECODER", "TIMER" or "EXT" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
AV2 DECODER
TV system PAL
Remote VCR1

3 Press the Cursor buttons (▲▼) ㉝ to select the type of external source equipment which is connected to the VCR's AV2 21-pin socket.
- Set the external source equipment as follows:

DECODER: When a decoder is connected.
TIMER: When a digital receiver is connected.
- When this is set, it is possible to have timer recordings for a Digital Receiver execute automatically simply by switching the Digital Receiver into timer standby mode and then switching this VCR into timer recording standby mode.
  (See page 16.)

EXT: When another VCR or a satellite receiver is connected.

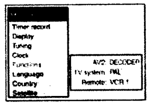
4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

To Set the Colour TV System Used During Playback or Recording from an External Source

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Functions", "TV system" and "PAL/MESECAM" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
AV2: DECODER
TV system: PAL
Remote: VCR 1

3 Press the Cursor buttons (▲▼) ㉝ to select the type of colour TV system (PAL or MESECAM) to be used during playback or during recording from an external source.

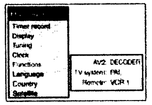
4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

To Set the Remote Control Mode

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Functions", "Remote" and "VCR 1/VCR 2"in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
AV2: DECODER
TV system: PAL
Remote: VCR 1

3 Press the Cursor buttons (▲▼) ㉝ to select the desired remote control mode.

VCR 1: Select this setting on both the VCR and the remote control for normal use with one VCR.

VCR 2: Select this setting on both the VCR and the remote control when using this VCR and another Panasonic VCR in the same place. This ensures that you can operate both VCRs independently with their respective remote control.
It also allows you to operate both VCRs with a single remote control. simply by changing the remote control mode on the remote control.

4 Press the OK button ㉟.

5 Press the OK button ㉟ again.

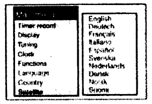
6 To change the remote control mode on the remote control itself, change the position of the VCR 1/2 switch ⑰ to match the setting made in step **3** above. If these settings are not matched, the remote control cannot be used to operate the VCR.

7 Press the EXIT button ㉞ to exit the On Screen Display.

Language Setting

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Language" and the entry field for "Language" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
English
Deutsch
Français
Italiano
Español
Svenska
Nederlands
Dansk
Norsk
Suomi

3 Press the Cursor buttons (▲▼) ㉝ to select the desired language.

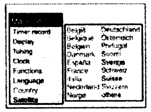
4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

Country Setting

1 Press the MENU button ㊱ to display the Main menu on the TV screen.

2 Press the Cursor buttons (▲▼◄) ㉝ to select "Country" and the entry field for "Country" in this order.


Timer record
Display
Tuning
Clock
Functions
Language
Country
Satellite
België
Belgique
Belgien
Danmark
España
France
Italia
Nederland
Norge
Deutschland
Österreich
Portugal
Suomi
Sverige
Schweiz
Suisse
Svizzera
Others

3 Press the Cursor buttons (▲▼◄) ㉝ to select the desired country.

4 Press the OK button ㉟ to conclude the setting.

5 Press the EXIT button ㉞ to exit the On Screen Display.

Glossary

VPS (Video Programme System)/ PDC (Programme Delivery Control)

The Video Programme System (VPS) or the Programme Delivery Control (PDC) is a very convenient system which assures that the TV programmes you have programmed for timer recording will be recorded exactly from beginning to end, even if the actual broadcasting time differs from the scheduled time due to delayed start or extension of the programme duration. Also, if a programme is interrupted and, for example, some special news is inserted, the recording will also be interrupted automatically and resumed when the programme continues.
Depending on the signals sent from the TV stations, the VPS/PDC system may not operate properly even when "VPS/PDC" has been set to "ON".
Please check with the broadcasters in your area for details.

- In the case of VPS/PDC recording, use the correct time (VPS/PDC time) for recording the TV programmes.
  Set "VPS/PDC" to "OFF" when the recording time is not the correct time (VPS/PDC time).
  VPS/PDC recording is not performed when the time (VPS/PDC time) is incorrect, even if only by one minute. To find out the correct time (VPS/PDC time), consult Teletext, a newspaper or magazine, or other source.
- If the actual broadcasting times of timer recordings overlap (regardless of whether they are VPS/PDC controlled), the recording that starts first always has priority, and the recording of the later beginning programme will start only after the first timer recording has finished.
- When the VPS/PDC signal drops out because the broadcast signal is weak, or when a TV station does not transmit a regular VPS/PDC signal, the timer recording will be performed in the normal mode (without VPS/PDC) even if it was programmed for VPS/PDC.
  In this case, even if the timer recording is performed, whatever has been programmed will not be cancelled at that particular time but at 4 a.m. on the following day.
- The start times of scheduled programmes listed in the newspaper or magazine may be changed at a later date. Set "VPS/PDC" to "OFF" when programming a programme whose start time has been subsequently changed. Particular care must be taken in this respect with ShowView programming since "VPS/PDC" is automatically set to "ON" in some countries.
- If a programme listed in a newspaper or magazine has two ShowView numbers, use the ShowView number for VPS/PDC if you wish to proceed with VPS/PDC recording using ShowView programming.
- The default settings for "VPS/PDC" differ depending on the country concerned. Refer to the table on the right.

Programming method / **Selected Country**	**ShowView programming**	**Changes in ShowView programming start time**	**Non-ShowView programming**
France, Belgium, Netherlands, Sweden, Denmark, Finland, Norway	ON	OFF	OFF
Germany, Switzerland, Austria, Other Countries	ON	ON	ON
Italy, Spain, Portugal	OFF	OFF	OFF

- If the broadcasting station is not transmitting VPS/PDC signals, "– – –" appears in the menu for timer programming under "VPS/PDC".

Q Link Function

This function works only if the VCR is connected via a fully-wired 21-pin Scart cable to a TV featuring the Q Link or similar function.
Q Link offers the following functions:

*(1) Download from the TV
When you connect the VCR to a TV, the station list data is automatically copied from the TV to the VCR, and the TV stations are assigned to the programme positions on the VCR in the same order as on the TV.

*(2) Direct TV Recording
By simply pressing the DIRECT TV REC button ⑥, you can at once record the same programme that you are watching on the TV.

*(3) TV/VCR Auto Power On
Even if the TV and the VCR are off (standby mode), pressing the Play ㉕, SHOW VIEW ㉘ or PROG./CHECK button ⑫ automatically turns on both the TV and the VCR.
- When a cassette with a broken erasure prevention tab is in the VCR, it turns on and starts playback. The TV also turns on.

*(4) VCR Auto Power Off
When you turn the TV off, the VCR is turned off as well. However, this function only works during rewinding, in the stop mode, or when no cassette is inserted.
If the VCR receives the Auto Power Off command while it is rewinding the tape, it turns off after the rewinding has been finished.
This function does not work during the following operations:
Preset Download, Auto Setup, Auto Clock Setting and Manual Tuning.

*(5) On Screen Display Messages
When you are watching a TV programme, the following VCR messages appear on the TV screen to inform you of the VCR's condition:

Message	**Message appears when:**
This programme has already started	A timer recording has just started.
Set VCR to timer standby mode	The VCR is not in the timer standby mode 10 minutes before the programmed recording start time of a timer recording (message appears every minute during these 10 minutes).
VCR is in timer standby mode	The VCR-ON/OFF ①, Play ㉕, EJECT ㊷ or SEARCH button ㉙ was pressed, although the VCR is in the timer standby mode.
VCR is in timer recording mode	The VCR-ON/OFF ①, Stop ⑨, REC/OTR (51), Pause/Still (52) (Pause/Slow ⑦) or SHOW VIEW button ㉘ was pressed while the VCR is in the timer recording mode.

- Depending on the type of TV used, the above messages may not appear correctly.

*The operations marked with asterisk are only available if the VCR is connected to a TV featuring the Q Link or the DATA LOGIC function.

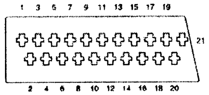
Note:
- If "Power save" is set to "ON", the Q Link functions do not work when the VCR is switched off (standby mode).

Crystal View Control (CVC)

The crystal view control function ensures that you always obtain the optimum picture quality so that you get the best picture automatically.
While the VCR is turned on, the CVC indication ㊾ is always displayed to show that the Crystal View Control is activated.

21-pin Scart Socket

The 21-pin Scart socket transmits both input and output signals for picture and sound. TVs equipped with the same type of socket can be connected here.
This type of socket is also called Peritel, Euro Connector and Euro AV.



AV1 Scart Socket (for Q Link connection)

01 Audio output
02 Audio input
03 Audio output
04 Audio ground
05 Blue ground
06 Audio input
07 Blue
08 Switching voltage
09 Green ground
10 Q Link data
11 Green
12 No connection
13 Red ground
14 Blanking ground
15 Red
16 Blanking
17 Video output ground
18 Video input ground
19 Video output
20 Video input
21 Ground

AV2 Scart Socket

01 Audio output
02 Audio input
03 Audio output
04 Audio ground
05 Blue ground
06 Audio input
07 Blue
08 Switching voltage
09 Green ground
10 Control signal
11 Green
12 Reserved
13 Red ground
14 Blanking ground
15 Red
16 Blanking
17 Video output ground
18 Video input ground
19 Video output
20 Video input
21 Ground

The Red, Green and Blue (RGB) video signals are looped through only from an external source unit, for example from a connected a pay-TV decoder, i.e. they are not from tape playback.

Adjusting the Playback Picture

Under normal conditions, the VCR automatically adjusts the playback picture for optimum quality. However, in some cases it may be necessary to adjust it manually.

If the Picture Contains Noise Bars and It Is Not Clear to See (Tracking adjustment):
If noise bars appear during normal playback, slow playback or still playback, follow the operations below.

TV screen

Playback picture containing noise bars

During normal or slow playback, press the Channel button ㉚ ∨ (−) or ∧ (+) until the bars noise disappear.
- If the noise bars appear during still playback, switch the VCR over to the slow playback mode and then adjust the tracking as explained above.

To Return to Auto Tracking:
Press the Channel buttons ㉚ ∨ (−) and ∧ (+) simultaneously.

If the Still Picture Scrolls Up or Down (V-Lock Adjustment):
If the still picture scrolls up or down, perform the following operation.

During still playback, keep the Channel button ㉚ ∨ (−) or ∧ (+) pressed until the picture stops scrolling.

Precautions:
- With certain TV models and tapes, it may not be possible to adjust the tracking.
- If you play back a cassette that was recorded on another VCR, the picture quality may be inferior and it may be necessary to adjust the tracking. Also, on some TVs, the picture may scroll up and down in the special playback functions.
However, these are not malfunctions.

4 ADJUSTMENT PROCEDURES

4.1. DISASSEMBLY METHOD

4.1.1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.

When reassembling, perform the steps in the reverse order.

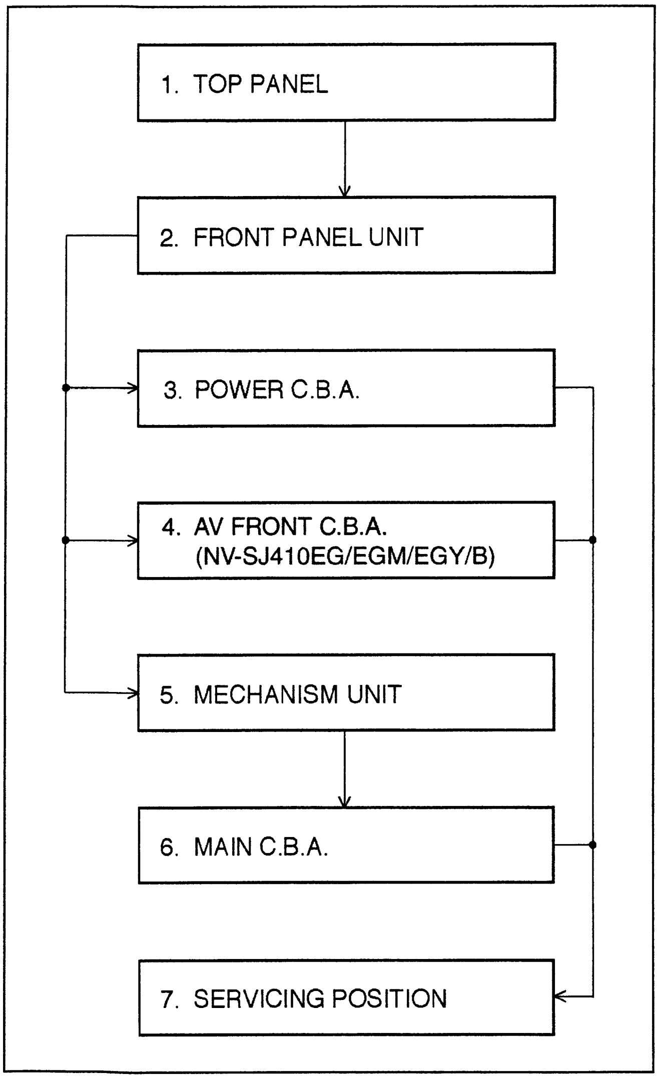

1. TOP PANEL
2. FRONT PANEL UNIT
3. POWER C.B.A.
4. AV FRONT C.B.A. (NV-SJ410EG/EGM/EGY/B)
5. MECHANISM UNIT
6. MAIN C.B.A.
7. SERVICING POSITION

Fig. D1

4.1.2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Remove	4 Screws (A)

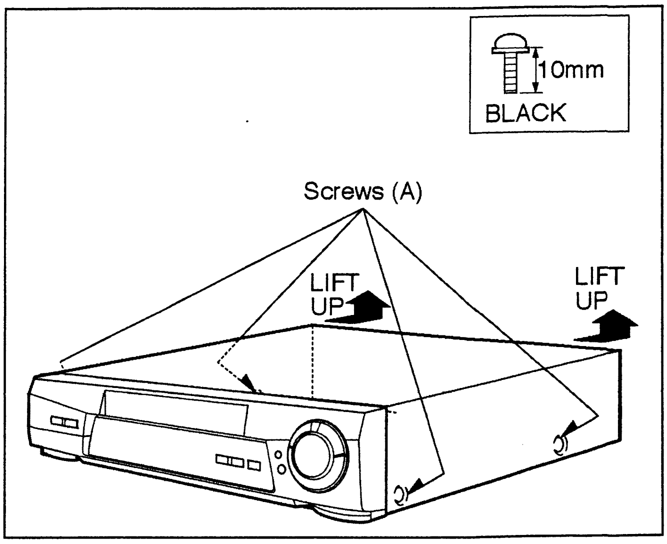

10mm
BLACK
Screws (A)
LIFT UP
LIFT UP

Fig.D2

2. REMOVAL OF THE FRONT PANEL UNIT

Unlock	7 Tabs (B)

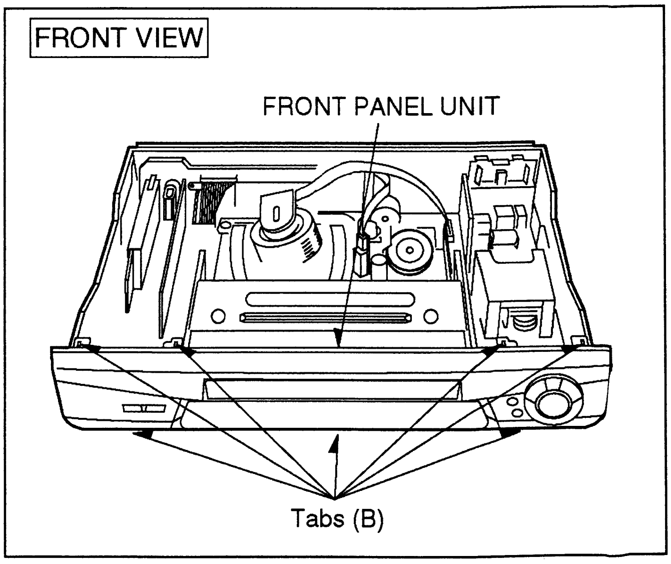

FRONT VIEW
FRONT PANEL UNIT
Tabs (B)

Fig. D3

3. REMOVAL OF THE POWER C.B.A.

Disconnect	Bridge Connector (C)
Unlock	6 Tabs (D)

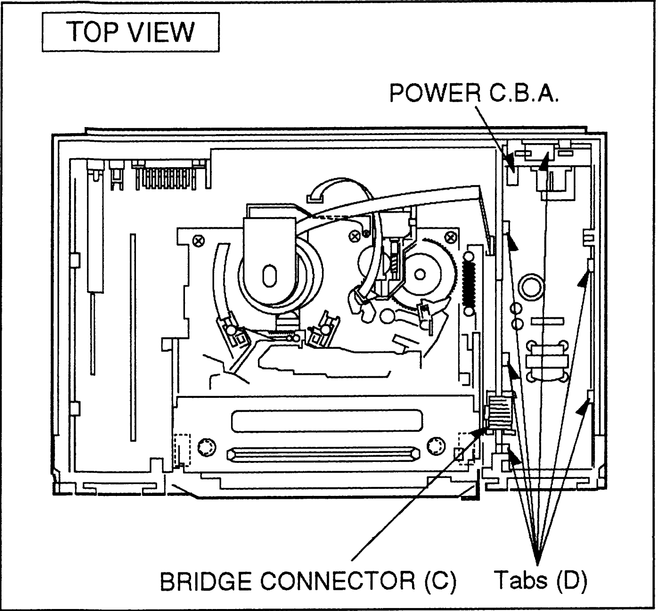

TOP VIEW
POWER C.B.A.
BRIDGE CONNECTOR (C)
Tabs (D)

Fig. D4

COUTIONS:

Please pay an attention to disconnect the connector (P1001-P1103) which connected between Main C.B.A. and Power supply unit as shown below.

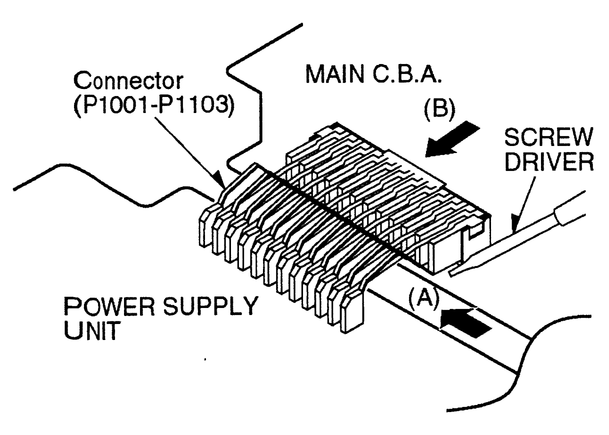

Connector
(P1001-P1103)
MAIN C.B.A.
(B)
SCREW
DRIVER
POWER SUPPLY
UNIT
(A)

Fig. D5

As above drawing, disconnect the connector by SCREW DRIVER from the direction (A).

Do not disconnect from direction (B) because it is possibility to damage the parts located by the connector.

4. REMOVAL OF THE AV FRONT C.B.A. (NV-SJ410EG/EGM/EGY/B)

Unlock	2 Tabs (E)

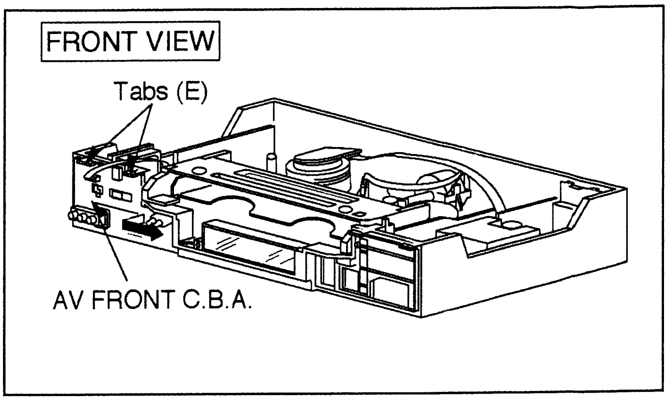

FRONT VIEW
Tabs (E)
AV FRONT C.B.A.

Fig. D6

5. REMOVAL OF THE MECHANISM UNIT

Remove	3 Screws (F)
Remove	2 Screws (G)
Remove	Screw (H)

Note:

a. Keep pressing 2 stoppers on Cassette Holder Plate and Press Cassette Holder Plate to the rear.

b. Remove the Mechanism Unit after bend the Cylinder Shield in the direction of the arrow.

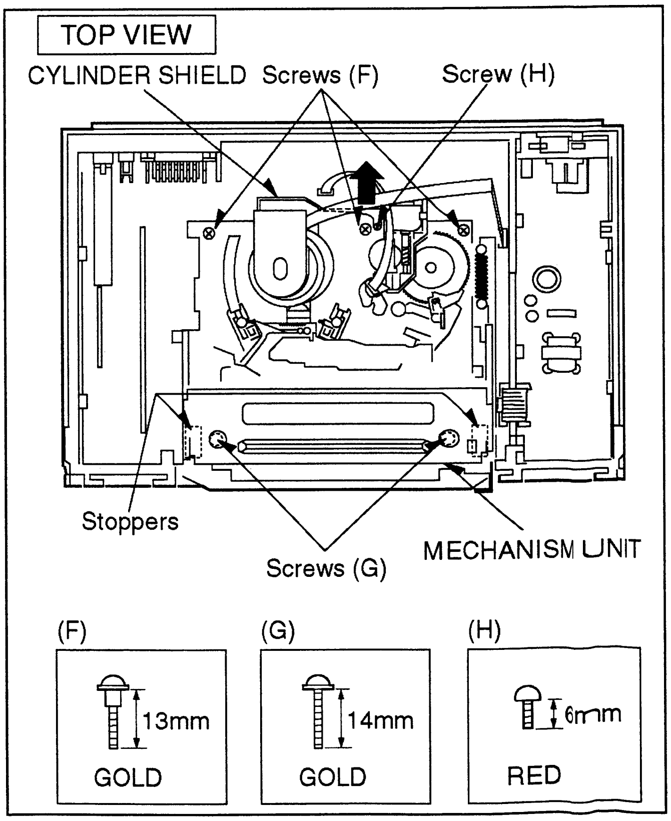

TOP VIEW
CYLINDER SHIELD
Screws (F)
Screw (H)
Stoppers
Screws (G)
MECHANISM UNIT
(F)
13mm
GOLD
(G)
14mm
GOLD
(H)
6mm
RED

Fig. D7

6. REMOVAL OF THE MAIN C.B.A.

Disconnect	Bridge Connector (C)
Remove	Screw (I)
Unlock	7 Tabs (J)

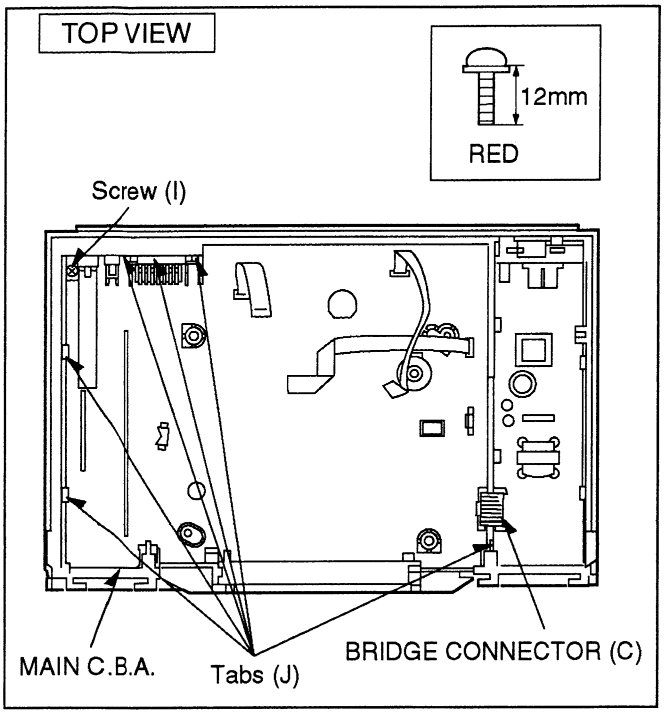

TOP VIEW
12mm
RED
Screw (I)
MAIN C.B.A.
Tabs (J)
BRIDGE CONNECTOR (C)

Fig. D8

7. SERVICING POSITION

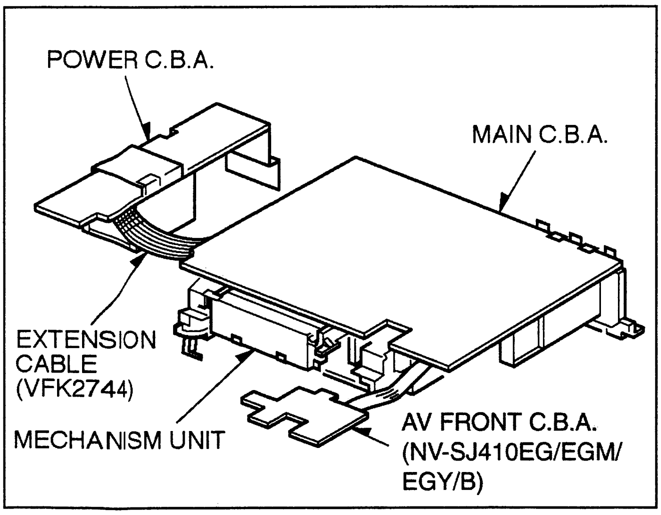

POWER C.B.A.
MAIN C.B.A.
EXTENSION CABLE (VFK2744)
MECHANISM UNIT
AV FRONT C.B.A. (NV-SJ410EG/EGM/ EGY/B)

Fig. D9

4.2. MECHANICAL ADJUSTMENT PROCEDURES

Refer to the Service Manual for Z-Mechanism Chassis. (Order No. VRD9802005C2)

4.3. ELECTRICAL ADJUSTMENT PROCEDURES

4.3.1. TEST EQUIPMENT

The following equipments are required for Electrical Adjustments.

1. Dual-Trace Oscilloscope
    - Voltage Range: 0.005-5V/div
    - Frequency Range: DC-35MHz
    - Probes: 10:1 / 1:1
2. Frequency Counter
    - Frequency Range: 0-10MHz
    - Probes: 1:1
3. Universal Counter
4. Digital Volt Meter (D.V.M.)
5. Video Sweep Generator
6. Sinewave Generator
7. Video Pattern Generator
8. Monitor TV
9. DC Power Supply
10. VHS Blank Tape
11. VHS Alignment Tape
    - Parts No.: VFJ8125H3F(PAL)

4.3.2. VCR SETTING

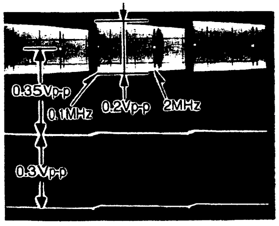
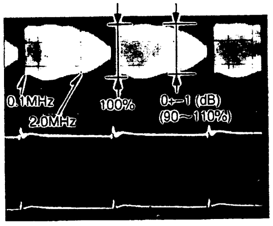
When no indication in the procedure, set each selector as follows.

1. TAPE SPEED: SP
2. CHANNEL: AV1/AV2/AV3

   (Set to signal input terminal number)

4.3.3. ADJUSTMENTS

ITEM	TP	ADJ.	MODE	INPUT	TAPE	M. EQ.	SPEC.	REMARKS
PG SHIFTER ADJUSTMENT	---	---	PLABACK	---	ALIGNMENT TAPE (PAL)	---	---	Refer to procedure of PG SHIFTER ADJUSTMENT as shown in Fig.E3.
AI FUNCTION ADJUSTMENT	---	---	PLAYBACK (SELF-REC)	PAL COLOUR BAR	BLANK TAPE	---	---	Refer to the procedure of AI FUNCTION ADJUSTMENT as shown in Fig.E4.
VIDEO FREQUENCY RESPONSE ADJUSTMENT	VIDEO OUT	---	SP/LP PLAYBACK (SELF-REC)	VIDEO SWEEP (See Fig.E1)	BLANK TAPE	OSCILLO SCOPE/ VIDEO SWEEP GENERAT OR	SP: 0+-1 (dB) (90~110%) LP: 0+-1 (dB) (90~110%) (See Fig. E2)	Refer to the procedure of VIDEO FREQUENCY RESPONSE ADJUSTMENT as shown in Fig. E5.

Fig.E1	Fig.E2
	
CONDITION: BURST SIGNAL OFF / 75 ohm TERMINATED	

4.3.4. PG SHIFTER ADJUSTMENT (AUTOMATIC)

PROCEDURES	FIP Display
Press the FF and EJECT keys simultaneously for 3 seconds.	0 00 00
Press the FF and EJECT keys simultaneously twice.	2 00 00
Press the EJECT key for 3 seconds.	2 00 00
Press the CH UP key once.	2 01 00
Insert the Alignment Tape. (PAL: VFJ81215H3F)	2 01 00
This adjustment is automatically started. (During the adjustment, the picture will be appeared on the monitor.)	2 01 00
When this Adjustment is terminated, the following operation will be activated. • Adjustment completed: The tape will be ejected. • Adjustment incompleted: "F2*" is indicated on the FIP.Check the Servo/System Control circuit and Cylinder Unit.	
To release Service Mode, press the FF and EJECT keys simultaneously 6 times until the normal indication on the FIP.	

Fig. E3

4.3.5. AI FUNCTION ADJUSTMENT (AUTOMATIC)

PROCEDURES	FIP Display
Press the FF and EJECT keys simultaneously for 3 seconds.	0 00 00
Press the FF and EJECT keys simultaneously twice.	2 00 00
Press the EJECT key for 3 seconds.	2 00 00
Press the CH UP key 3 times.	2 03 00
Insert the Blank Tape.	2 03 00
This adjustment is automatically started.	2 03 00
When this Adjustment is terminated, the following operation will be activated. • Adjustment completed: The VCR goes to STOP Mode.	
To release Service Mode, press the FF and EJECT keys simultaneously 6 times until the normal indication on the FIP.	

Fig. E4

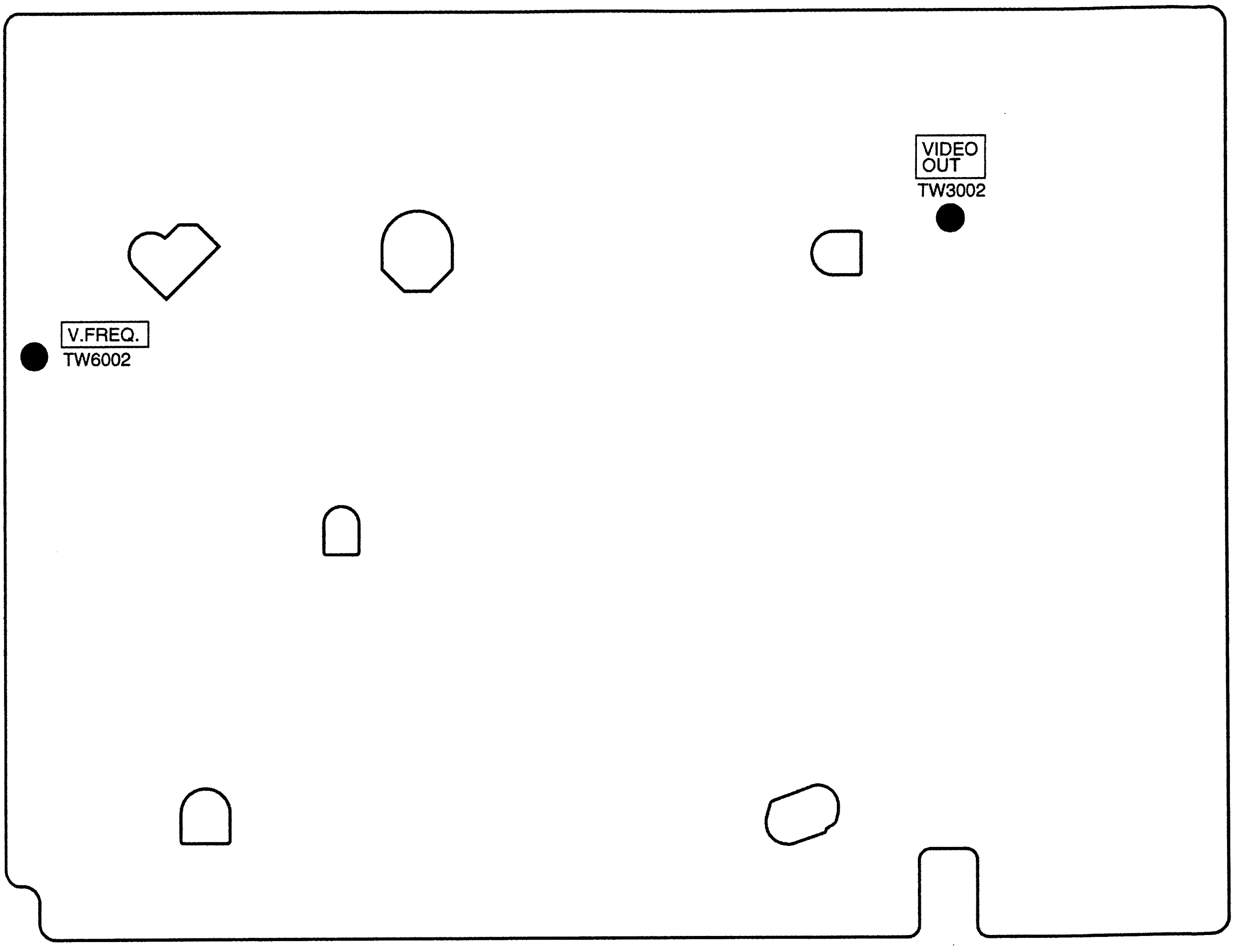
4.3.6. VIDEO FREQUENCY RESPONSE ADJUSTMENT

PROCEDURES	FIP Display
Press the FF and EJECT keys simultaneously for 3 seconds.	0 00 00
Press the FF and EJECT keys simultaneously twice.	2 00 00
Press the EJECT key for 3 seconds.	2 00 00
Press the CH UP and/or CH DOWN key until "11" is displayed on the FIP.	2 11 00
Insert the Self-recorded tape and playback it.	2 11 00
Connect the Oscilloscope to: *CH1....Video Out. (TW3002). *CH2....V.FREQ. (TW6002).	
Press the "4" key on the Remote Controller. (Confirm that TW6002 becomes high (5V).)	
Adjust the Frequency response by pressing the "2" (increase) and/or "8" (decrease) key on the Remote Controller.	
Store the Adjusted value by pressing "5" key on the Remote Controller.	
Release the Service mode by pressing the EJECT and FF keys simultaneously 6 times until the FIP becomes normal indication.	

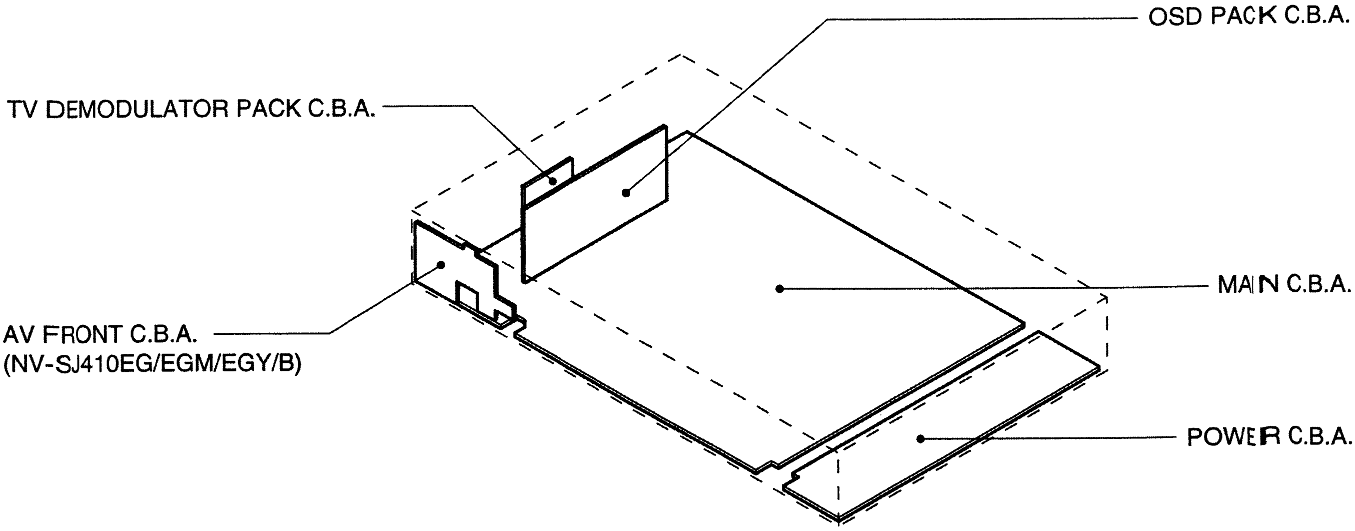
Fig. E5

4.3.7. LOCATION OF TEST POINTS & CONTROLS

MAIN C.B.A.


VIDEO OUT
TW3002
V.FREQ.
TW6002

4.3.8. CIRCUIT BOARD LAYOUT


OSD PACK C.B.A.
TV DEMODULATOR PACK C.B.A.
MAIN C.B.A.
AV FRONT C.B.A.
(NV-SJ410EG/EGM/EGY/B)
POWER C.B.A.

5 ABBREVIATIONS

443NT [L]	4.43 NTSC Ⓛ
A. COMP	AUDIO COMPONENT SIGNAL
A. COMPO	AUDIO COMPONENT SIGNAL
A. D.P [L]	AUDIO DUBBING PAUSE Ⓛ
A. D/L [L]	AUDIO DUBBING PAUSE Ⓛ
A. DEF [S]	AUDIO DEFEAT
A. DEF [S] [L]	AUDIO DEFEAT
A. DUB P [L]	AUDIO DUBBING PAUSE Ⓛ
A. DUB [H]	AUDIO DUBBING Ⓗ
A. ERASE	AUDIO ERASE
A. H. SW	AUDIO HEAD SWITCHING PULSE
A. HEAD [R]	AUDIO HEAD (REC)
A. HEAD [W]	AUDIO HEAD (PLAY)
A. IN [L]	AUDIO INPUT (L)
A. IN [R]	AUDIO INPUT (R)
A. MUT [H]	AUDIO MUTE Ⓗ
A. MUTE [H]	AUDIO MUTE Ⓗ
A. OUT [L]	AUDIO OUTPUT (L)
A. OUT [R]	AUDIO OUTPUT (R)
A. RF OUT	AUDIO RF SIGNAL OUTPUT
A/VS/S. DATA	AV SW/SERIAL DATA
AC ONLINE	AC ONLINE
AC. O/EE. H	AC ONLINE/EE Ⓗ
AFC S C	AFC S CURVE
AFC [S]	AFC S CURVE
AFC. DEF	AFC DEFEAT
ARFC OUT	AUDIO RF SIGNAL OUTPUT
ART. V	ARTIFICIAL VERTICAL SYNC SIGNAL
ART. V. MM	ARTIFICIAL VERTICAL SYNC SIGNAL MONO MULTI
ART. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL Ⓗ/NORMAL
AT. V/H/N	ARTIFICIAL VERTICAL SYNC SIGNAL
ATSW/TEST/NOR/SE	TEST/NORMAL/SERVICE
AUDIO IN [L]	AUDIO INPUT (L)
AUDIO IN [R]	AUDIO INPUT (R)
AUDIO OUT [L]	AUDIO OUTPUT (L)
AUDIO OUT [R]	AUDIO OUTPUT (R)
AUDIO SELECT [H]	AUDIO SELECT Ⓗ
AUDIO. L	AUDIO (L)
AUDIO. R	AUDIO (R)
AV CNT	AV CONTROL
AV CTL	AV CONTROL
AV CTL/S. CLK	AV CONTROL/SERIAL CLOCK
AV. C.M.	AV CONTROL MODE
AVCNT/METER. R	AV CONTROL/LEVEL METER (R)
AVSW/METER. L	AV SW/LEVEL METER (L)
B MODE. H	B MODE Ⓗ
B.G.P	BURST GATE PULSE
BACKUP 5V	BACK UP 5V
BAND. U.E.	BAND U
BANDVL. D	BAND VL
BI/MI [L]	BILINGUAL/MIX Ⓛ

BIL	BILINGUAL
BIL [L]	BILINGUAL Ⓛ
BIL. [H]	BILINGUAL Ⓗ
BIL/M1 [L]	BILINGUAL Ⓛ
BS CLOCK	BS CLOCK
BS DATA	BS DATA
BS LCH IN	BS L CHANNEL INPUT
BS MIX [H]	BS MIX Ⓗ
BS MON [H]	BS MONITOR Ⓗ
BS MONI [H]	BS MONITOR Ⓗ
BS RCH IN	BS R CHANNEL INPUT
BS VIDEO	BS VIDEO SIGNAL
BS VIDEO/BS1	BS VIDEO SIGNAL
BS [H]	BS Ⓗ
BS. LEVEL	BS LEVEL
BS. M [H]	BS MONITOR Ⓗ
BS/VTR [H]	BS/VTR Ⓗ
BUS CLK	BUS CLOCK
BUS LSN	BUS LISTEN
BUS TLK	BUS TALK
BUZZER	BUZZER
CAP EC	CAPSTAN TORQUE CONTROL
CAP M GND	CAPSTAN MOTOR GND
CAP. ET	CAPSTAN TORQUE CONTROL
CAP. FG1	CAPSTAN FG1 PULSE
CAP. FG2	CAPSTAN FG2 PULSE
CAS. SW	CASSETTE SW
CCN	PLAYBACK CONTROL SIGNAL (–)
CCP	PLAYBACK CONTROL SIGNAL (+)
CHM	CONTROL SIGNAL (+)
CHP	CONTROL SIGNAL (–)
CINEM [L]	CINEMA Ⓛ
CINEMA [L]	CINEMA Ⓛ
CINEMA/MIX	CINEMA/MIX
CKL	RATCH LOCK
CKS	SHIFT LOCK
CL	CLOCK
CLK	CLOCK
CLK (C.G)	CLOCK
CLOCK. IN	CLOCK INPUT
CLP	CLAMP
COL/B/W/NOR	COLOUR/BLACK & WHITE/NORMAL
COLOR [H]	COLOUR Ⓗ
CONV	CONVERTOR
CS	CHIP SELECT
CTL GND	CONTROL GND
CTL HEAD [+]	CONTROL HEAD (+)
CTL HEAD [–]	CONTROL HEAD (–)
CTL [+]	CONTROL HEAD (+)
CTL [–]	CONTROL HEAD (–)
CUE BIAS	CUE BIAS
CURRENT LIM	CURRENT LIMMITER
CYL ET	CYLINDER TORQUE CONTROL

CYL GND	CYLINDER GND	FULL. E. 12V	FULL ERASE 12V
D.F.M. REC [H]	DELAIED FM RECORDING Ⓗ	GND [A]	GND (ANALOG)
D. FM REC [L]	DELAIED FM RECORDING Ⓛ	GND [TU]	GND (TUNER)
D. GND	DIGITAL GND	GND/N. SW. 12V	GND/NON SW 12V
D. REC [H]	DELAYED RECORDING Ⓗ	H. SYNC	HORIZONTAL SYNC
D4/S. LED	D4/STILL LED	H. AMP. SW	HEAD AMP SW PULSE
D4/STILLED	D4/STILL LED	H. P <R>	HEAD PHONE (R)
DAC [CLK]	TUNER DAC (CLOCK)	H. P <L>	HEAD PHONE (L)
DAC/FSCS	TUNER DAC/FS CHIP SELECT	H. P GND	HEAD PHONE GND
DAREC [H]	DELAYED AUDIO RECORDING Ⓗ	H. P OUT [L]	HEAD PHONE OUTPUT (L)
DATA	DATA	H. P OUT [R]	HEAD PHONE OUTPUT (R)
DECODER [L]	DECODER (L)	H. SW	HEAD SW PULSE
DECODER [R]	DECODER (R)	HEAD PHONE [L]	HEAD PHONE (L)
DEW	DEW	HEAD PHONE [R]	HEAD PHONE (R)
DEW SNS	DEW SENSOR	HEAD SW	HEAD SW
DFMRE [H]	DELAYED FM AUDIO RECORDING Ⓗ	HEATER [+]	HEATER (+)
E. REC 5V	EXCEPT RECORDING 5V	HEATER [–]	HEATER (–)
EC	ERROR TORQUE CONTROL	HSS	HORIZONTAL SYNC SIGNAL
ECR	ERROR TORQUE CONTROL REFERENCE VOLTAGE	HTR [+]	HEATER (+)
		HTR [–]	HEATER (–)
EDT TRIG [L]	EDIT TRIGGER Ⓛ	I RFE	REFERENCE CURRENT
EDIT [H]	EDIT Ⓗ	ICL	CONTROL AGC CIRCUIT
EE [H]	EE Ⓗ	IF	INTERMEDIATE FREQUENCY
EE [H]/INS [M]	EE Ⓗ/INSERT Ⓜ	IN SELA1	INPUT SELECT A1 POSITION
EE. VV. TR	EE/VV/TRICK PLAY	IN SELA2	INPUT SELECT A2 POSITION
EJECT. PO	EJECT POSITION	IN SELA3	INPUT SELECT A3 POSITION
EJECT/VDET	EJECT/REVERSE SLOW LOCK	INS L/R [L]	INSERT Lch/Rch Ⓛ
ENV. SEL	ENVELOPE SELECT	INS. [H]	INSERT Ⓗ
ENVE. OUT	ENVELOPE OUTPUT	INSEL A1	INPUT SELECT A1 POSITION
ENVE. SEL	ENVELOPE SELECT	INSEL A2	INPUT SELECT A2 POSITION
ENV SELECT	ENVELOPE SELECT	INSERT	INSERT
EP [H]	LP Ⓗ	INSERT [H]	INSERT Ⓗ
EP/LP [H]	LP Ⓗ	IO CS	INPUT/OUTPUT CHIP SELECT
EP/LP/SP	LP/SP	JOG1	JOG1
EP/SS [H]	LP/SLOW/STILL/STOP Ⓗ	JOG S3 LED/FOWRD	JOG LED/FORWARD LED
EPROMCS	EPROM CHIP SELECT	JOG/F. LED	JOG LED/FORWARD LED
EX. REC 5V	EXCEPT RECORDING 5V	JSB [H]	JSB Ⓗ
FF/REW [L]	FIRST FORWARD/REWIND Ⓛ	JST. CLCK	JUST CLOCK
FG1 IN	FG1 PULSE INPUT	JST. CLK	JUST CLOCK
FG2 IN	FG2 PULSE INPUT	JST. CLOCK	JUST CLOCK
FILTER ADJUSTMENT	FILTER ADJUSTMENT	L. OUT	Lch OUTPUT
FLY ERASE [H]	FLYING ERASE HEAD ON Ⓗ	L. CH [H]	Lch Ⓗ
FLY ON [H]	FLYING ERASE HEAD ON Ⓗ	L. CH [L]	Lch Ⓛ
FLY. E [H]	FLYING ERASE HEAD ON Ⓗ	LED (MAIN)	LED (MAIN)
FM MUT [H]	FM AUDIO MUTE Ⓗ	LED (STEREO)	LED (STEREO)
FM MUTE [H]	FM AUDIO MUTE Ⓗ	LED (SUB)	LED (SUB)
FM OUT [L]	FM OUTPUT (L)	LED CKL	LED SERIAL CLOCK
FM OUT [R]	FM OUTPUT (R)	LED CKS	LED SERIAL CLOCK
FM PACK OUT [L]	FM PACK OUTPUT (L)	LED DATA	LED SERIAL DATA
FM PACK OUT [R]	FM PACK OUTPUT (R)	LINE IN 1 [L]	LINE INPUT 1 (L)
FM/BS SEL [L]	FM/BS SELECT (L)	LINE IN 1 [R]	LINE INPUT 1 (R)
FM/BS SEL [R]	FM/BS SELECT (R)	LINE IN 2 [L]	LINE INPUT 2 (L)
FS. CLK	FS CLOCK	LINE IN 2 [R]	LINE INPUT 2 (R)
FUL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN V	LINE INPUT VIDEO
FULL. E [H]	FULL ERASE HEAD ON Ⓗ	LINE IN [L]	LINE INPUT (L)

LINE IN [R]	LINE INPUT (R)
LINE OUT [L]	LINE OUTPUT (L)
LINE OUT [R]	LINE OUTPUT (R)
LP [H]	LP Ⓗ
LPTRI [L]	LP TRICK PLAY Ⓛ
Lch/A. DUB	Lch/AUDIO DUBBING
M GND	MOTOR GND
M REG	MOTOR REGULATOR
MAIN OUT	MAIN OUTPUT
MAIN [L]	MAIN Ⓛ
MAIN/MONO	MAIN/MONAURAL
MAX IN	MAXIMAM INPUT
MES [H]	MESECAM Ⓗ
MESE [H]	MESECAM Ⓗ
MESE [L]	MESECAM Ⓛ
METER 5V	LEVEL METER 5V
METER [L]	LEVEL METER (L)
METER [R]	LEVEL METER (R)
METER. L/AVS	LEVEL METER (L)
METER. R/AVC	LEVEL METER (R)
MI/BI [L]	MIX Ⓗ/BILIGUAL
MIC GND	MIC GND
MIC IN	MIC INPUT
MIC IN [L]	MIC INPUT (L)
MIC IN [R]	MIC INPUT (R)
MIC [H]	MIC Ⓗ
MIX [H]	MIX Ⓗ
MIX [H]/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINE	MIX Ⓗ/CINEMA SOUND Ⓛ
MIX/CINEMA [L]	MIX Ⓗ/CINEMA SOUND Ⓛ
MN. H/M. L	MONAURAL Ⓗ/MAIN Ⓛ
MN. H/MAI. L	MONAURAL Ⓗ/MAIN Ⓛ
MN2/MES. L	MONAURAL 2/MESECAM Ⓛ
MODE SEL	AUDIO MODE SELECT
MODE SW	AUDIO MODE SW
MODE. S. IN	AUDIO MODE SELECT INPUT
MODE. S. OUT	AUDIO MODE SELECT OUTPUT
MONO [H]	MONAURAL Ⓗ
MONO [H]/MAIN [L]	MONAURAL Ⓗ/MAIN Ⓛ
MONO2 [L]	MONAURAL 2
MONO2/MESE [FM(L)]	MONAURAL 2/MESECAM (FM Ⓛ)
MOTOR GND	MOTOR GND
MUTE	MUTE
N. A. REC [L]	NORMAL AUDIO RECORDING
N. SW 12V	NON SW 12V
N. SW. 5. DET	NON SW 5V DETECT
NICAM	NICAM
NICAM [L]	NICAM Ⓛ
NOL [H]	PAL Ⓗ/4.43 NTSC Ⓜ/3.58 NTSC Ⓛ
NOR/SOFT [H]	NORMAL/SOFT TAPE PLAY Ⓗ
NORMAL [H]	NORMAL Ⓗ
NR BIAS	NR BIAS
NTSC [L]	NTSC Ⓛ
OCH	CONTROL AGC CIRCUIT
OUT	OUTPUT

P-OFF [H]	POWER OFF Ⓗ
P-OFF [L]	POWER OFF Ⓛ
P. FAIL	POWER FAILURE DETECT
P. OFF [H]	POWER OFF Ⓗ
P. OFF [L]	POWER OFF Ⓛ
PAL [H]	PAL Ⓗ
PAL [L]/NTSC [H]	PAL Ⓛ/NTSC Ⓗ
PB ADJ OUT	PLAYBACK ADJUST OUTPUT
PB OUT	PLAYBACK OUTPUT
PB. H	PLAYBACK Ⓗ
PFG	PG/FG
PHOTSN +B	PHOTO SENSOR +B
PICT. CNT	PICTURE CONTROL
PLAY LED/RVS LED	PLAY LED/REVERSE LED
PLAY. PO	PLAY POSITION
PLAY/R. LED	PLAY LED/REVERSE LED
PLY/DEW	PLAY/DEW Ⓗ
POWER OFF [L]	POWER OFF Ⓛ
PREROLL [H]	PREROLL Ⓗ
PWRFAIL	POWER FAILURE DETECT
R. CH [H]	Rch Ⓗ
R. CH [L]	Rch Ⓛ
R. ST	RESET
R/S/F	REVERSE Ⓗ/STOP Ⓜ/FORWARD Ⓛ
RCH [H]	Rch Ⓗ
REC 12V	RECORDING 12V
REC CHROMA	RECORDING CHROMINANCE SIGNAL
REC H	RECORDING Ⓗ
REC IN	RECORDING INPUT
REC OUT [L]	RECORDING OUTPUT Ⓛ
REC START	RECORDING START
REC VR [C]	RECORDING VOLUME (COMMON)
REC VR [L]	RECORDING VOLUME (L)
REC VR [R]	RECORDING VOLUME (R)
REC Y	RECORDING LUMINANCE SIGNAL
REC [H]	RECORDING Ⓗ
REC. C	RECORDING CHROMINANCE SIGNAL
REC. Y	RECORDING LUMINANCE SIGNAL
REC/EE CTL	RECORDING/EE CONTROL
REEL-T	REEL PULSE (TAKE-UP)
REEL-S	REEL PULSE (SUPPLY)
REGULATOR FILTER	REGULATOR FILTER
RESET	RESET
REV M F/R	REVIEW MOTOR FORWARD/REVERSE
REV M V1	REVIEW MOTOR V1
REV M V2	REVIEW MOTOR V2
REV MOTOR F/R	REVIEW MOTOR FORWARD/REVERSE
REV MOTOR V1	REVIEW MOTOR V1
REV MOTOR V2	REVIEW MOTOR V2
REV MOTOR [+]	REVIEW MOTOR (+)
REV MOTOR [–]	REVIEW MOTOR (+)
REV. M. GND	REVIEW MOTOR GND
RF. CHROMA	RF CHROMINANCE SIGNAL

RF OUT	RF OUTPUT
RF Y	RF LUMINANCE SIGNAL
RF. Y. IN	RF LUMINANCE SIGNAL INPUT
RF. Y. OUT	RF LUMINANCE SIGNAL OUTPUT
ROTAR. SW	ROTARY SW
ROTARY	ROTARY SW
RST	RESET
RST [L]	RESET Ⓛ
Rch/INST	Rch/INSERT
S IN	SERIAL DATA INPUT
S OUT	SERIAL DATA OUTPUT
S-PHOTO	SUPPLY PHOTO TRANSISTOR
S-RL. PLS	SUPPLY REEL PULSE
S. CLK	SERIAL CLOCK
S. CLK/AV	SERIAL CLOCK/AV
S. DATA	SERIAL DATA
S. DATA/A	SERIAL DATA
S. PHOTO	SUPPLY PHOTO TRANSISTOR
S. TAB [L]	SAFETY TAB SW ON Ⓛ
S/P/N	SECAM/PAL/NTSC
SC IN	SERIAL CLOCK INPUT
SC OUT	SERIAL CLOCK OUTPUT
SCK SELECT	SERIAL CLOCK SELECT
SEL OUT [L]	SELECT OUTPUT (L)
SEL OUT [R]	SELECT OUTPUT (R)
SHUTTLE 1	SHUTTLE 1
SIF	SOUND INTERMEDIATE FREQUENCY
SLMUT [H]	INPUT SELECT MUTE Ⓗ
SLNID [+]	SOLENOID (+)
SLNID [–]	SOLENOID (–)
SLWTR. MM	SLOW TRACKING MONO MULTI
SLWTR. REF	SLOW TRACKING REFERENCE VOLTAGE
SNS. GND	SENSOR GND
SOFT [H]	SOFT TAPE PLAY Ⓗ
SOFT [H]/NORMAL	SOFT TAPE PLAY Ⓗ/NORMAL Ⓗ
SOLENOID ON [L]	SOLENOID ON Ⓛ
SP [H]	SP Ⓗ
SP/L/SLP	SP/LP
SSS [L]	SLOW/STILL/STOP
STEREO LED	STEREO LED
STEREO [H]	STEREO Ⓗ
STEREO [L]	STEREO Ⓛ
STOP. PO	STOP POSITION
STOP/5V	STOP POSITION/5V
STOP1/TAPE SEL	STOP1 POSITION/TAPE SELECT
STOP1/PAL:ST	STOP1 POSITION/PAL
STOP2. PO	STOP 2 POSITION
STOP2/S-TAB	STOP 2 POSITION/SAFETY TAB SW
STREO [H]	STEREO Ⓗ
SUB BIAS	SUB BIAS
SUB. SW	SUB SW
SVHS CAS [L]	S-VHS CASSETTE Ⓛ
SW. 5. DET	SW 5V DETECT
SYNC [L]	SYNC Ⓛ
SYSCON 5V	SYSTEM CONTROL 5V
SYSTEM	SYSTEM SW
T-PHOTO	TAKE-UP PHOTO TRANSISTOR
T-RL. PLS	TAKE-UP REEL PULSE
T. BUSCLK	TIMER BUS CLOCK
T. BUSLSN	TIMER BUS LISTEN
T. BUSTLK	TIMER BUS TALK
T. END [L]	TAPE END Ⓛ
T. PHOTO	TAKE-UP PHOTO TRANSISTOR
TAPE END [L]	TAPE END Ⓛ
TAPE END [L]/CAM	TAPE END Ⓛ/CAMERA PAUSE
TEST	TEST MODE
TPZ	TRAPEZOIDAL WAVE CIRCUIT
TRIC [L]	TRIC PLAY Ⓛ
TRICK [L]	TRIC PLAY Ⓛ
TRK. ENV	AUTO TRACKING ENVELOPE DETECT
TU. AUDIO	TUNER AUDIO
TU. GND	TUNER GND
TU. V. IN	TUNER VIDEO SIGNAL INPUT
TU. VIDEO	TUNER VIDEO
TUN NOR IN	TUNER NORMAL INPUT
TUN R	TUNER AUDIO (R)
TUN. AUDIO IN	TUNER AUDIO INPUT
TUNER 12V	TUNER 12V
TUNER L	TUNER AUDIO (L)
TUNER V IN	TUNER VIDEO SIGNAL INPUT
TUNER [L]	TUNER AUDIO (L)
TUNER [N]	TUNER AUDIO (NORMAL)
TUNER [R]	TUNER AUDIO (R)
TUNER. 12	TUNER 12V
TUOFF [H]	TUNER OFF Ⓗ
TV. AUDIO	TV AUDIO
TV/VTR	TV/VTR
TXTON [L]	TEXT ON Ⓛ
U. REG45V	UNREGULATOR 45V
UNREG	UNREGULATOR
UNREG19V	UNREGULATOR 19V
V. REF	REFERENCE VOLTAGE
V. EE [H]	VIDEO EE Ⓗ
V. EE [L]	VIDEO EE Ⓛ
VCO REF	REFERENCE OSCILLATER
VD. IN	VIDEO SIGNAL INPUT
VD. OUT	VIDEO SIGNAL OUTPUT
VIDEO EE [L]	VIDEO EE Ⓛ
VIDEO IN	VIDEO SIGNAL INPUT
VIDEO OUT	VIDEO SIGNAL OUTPUT
VM	MOTOR VOLTAGE
VM DOWN [L]	MOTOR VOLTAGE DOWNⓁ
VSS	VERTICAL SYNC SIGNAL
VTR [H]	VTR Ⓗ
VTR. 12V	VTR 12V
X IN	OSCILLATOR INPUT
X OUT	OSCILLATOR OUTPUT

6 INPUT/OUTPUT CHART

6.1. INPUT/OUTPUT CHART FOR IC6001

<table>
<tr><th>Pin No.</th><th>In/Out</th><th>Port Name</th><th>Function</th></tr>
<tr><td>1</td><td>O</td><td>AUDIO DEF(H)</td><td>This port is low while Decoder IC is reset.</td></tr>
<tr><td>2</td><td>O</td><td>V.EE2 (L)</td><td>Terminal for EE/VV switching. (Timing/logic are same as "pin 24".)</td></tr>
<tr><td>3</td><td>I</td><td>AFC(S)</td><td>Tuner S curve input.</td></tr>
<tr><td>4</td><td>O</td><td>Not used</td><td>Not used</td></tr>
<tr><td>5</td><td>I</td><td>L6/U6/U4/U2/U2L</td><td>Cylinder unit (HI-FI/Normal) selection.
<table>
<tr><th>Input voltage</th><th>Cylinder Type</th><th>HI-FI/NORMAL</th></tr>
<tr><td>More than 4.2V</td><td>LDD 6CH</td><td>HI-FI</td></tr>
<tr><td>3.0V - 4.2V</td><td>UDD 6CH</td><td>HI-FI</td></tr>
<tr><td>2.0V - 3.0V</td><td>UDD 2CH
(No LP mode)</td><td>NORMAL</td></tr>
<tr><td>0.8V - 2.0V</td><td>UDD 2CH
(With LP mode)</td><td>NORMAL</td></tr>
<tr><td>Less than 0.8V</td><td>UDD 4CH</td><td>NORMAL</td></tr>
</table></td></tr>
<tr><td>6</td><td>I</td><td>NORM/SER/T1/T2</td><td>Normal/Service/Test1/Test2 mode selection.
<table>
<tr><th>Input voltage</th><th>Mode</th></tr>
<tr><td>More than 4.0V</td><td>Normal</td></tr>
<tr><td>2.5V - 4.0V</td><td>Service</td></tr>
<tr><td>1.0V - 2.5V</td><td>Test2</td></tr>
<tr><td>Less than 1.0V</td><td>Test1</td></tr>
</table></td></tr>
<tr><td>7</td><td>I</td><td>S-PHOT</td><td>This port receives 2.4V or less when Supply photo sensor detects the tape end.</td></tr>
<tr><td>8</td><td>I</td><td>T-PHOT</td><td>This port receives 2.4V or less when Take-up photo sensor detects the tape beginning.</td></tr>
<tr><td>9</td><td>I</td><td>TRACKING ENVE</td><td>Playback envelope input for auto tracking adjustment and CVC.</td></tr>
<tr><td>10</td><td>O</td><td>Not used</td><td>Not used</td></tr>
<tr><td>11</td><td>O</td><td>CURRENT LIMIT</td><td>Capstan motor current limitter output.</td></tr>
<tr><td>12</td><td>O</td><td>F. ADJUST</td><td>Frequency responsibility adjustment voltage output.</td></tr>
<tr><td>13</td><td>O</td><td>ART.V/H/N</td><td>This port supplies artificial vertical sync signal to stabilize the picture in special playback mode.</td></tr>
<tr><td>14</td><td>I</td><td>REMOCON</td><td>Remote control signal input and Digital Link input.</td></tr>
<tr><td>15</td><td>O</td><td>ROTARY.SW</td><td>Rotary switching signal output.</td></tr>
<tr><td>16</td><td>O</td><td>H.A.SW</td><td>Head amp switching signal output.</td></tr>
<tr><td>17</td><td>I</td><td>ENVE.SLECT</td><td>This port receives the playback envelope signal level to select the video head in special playback mode.</td></tr>
<tr><td>18</td><td>O</td><td>VIDEO.H.SW</td><td>Video head switching signal output.</td></tr>
<tr><td>19</td><td>O</td><td>AUDIO.H.SW</td><td>Audio head switching signal output.</td></tr>
<tr><td>20</td><td>O</td><td>Not used</td><td>Not used</td></tr>
<tr><td>21</td><td>O</td><td>D.REC(H)</td><td>Video signal recording on/off control.</td></tr>
<tr><td>22</td><td>O</td><td>C.EMPHA(H)</td><td>This port supplies high during a certain time from starting the recording to control the HI-FI audio recording current.</td></tr>
<tr><td>23</td><td>O</td><td>D.FM.MUTE (H)</td><td>HI-FI audio recording on/off control.</td></tr>
<tr><td>24</td><td>O</td><td>VIDEO.EE(L)</td><td>This port is low during EE mode.</td></tr>
<tr><td>25</td><td>O</td><td>PLAY REC (L)</td><td>Capstan voltage switching control output.
Except Play/Rec:High
Play/Rec:Low (Jog/Shuttle mode in Playback:High)</td></tr>
</table>

Fig. MP1

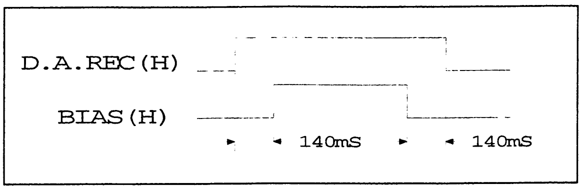
<table>
<tr><th>Pin No.</th><th>In/Out</th><th>Port Name</th><th>Function</th></tr>
<tr><td>26</td><td>O</td><td>D.A.REC(H)</td><td rowspan="2">DC voltage control for recording mode.
 </td></tr>
<tr><td>27</td><td>O</td><td>BIAS(H)</td></tr>
<tr><td>28</td><td>O</td><td>FM.MUTE(H)</td><td>This port is high during special playback (CUE,REV,SLOW,STILL) mode, head cleaning and so on.</td></tr>
<tr><td>29</td><td>O</td><td>VSYNC(L)</td><td>This port is low when detecting the V-Sync signal.</td></tr>
<tr><td>30</td><td>O</td><td>FULL.ERASE(H)</td><td>Full erase on/off control.
ON : High
OFF : Low</td></tr>
<tr><td>31</td><td>I</td><td>POS.SW3</td><td rowspan="3">
<table>
<tr><th>P. SW 3</th><th>P. SW 2</th><th>P. SW 1</th><th>Position (Mode) Name</th></tr>
<tr><td>O</td><td>O</td><td>O</td><td>EJECT</td></tr>
<tr><td>O</td><td>O</td><td>I</td><td>CASSETTE DOWN</td></tr>
<tr><td>O</td><td>I</td><td>O</td><td>REV,REV SLOW</td></tr>
<tr><td>O</td><td>I</td><td>I</td><td>MID (LOADING/UNLOADING)</td></tr>
<tr><td>I</td><td>O</td><td>O</td><td>PLAY/REC,STILL/PAUSE,CUE
FWD SLOW,STOP3*1</td></tr>
<tr><td>I</td><td>O</td><td>I</td><td>STOP</td></tr>
<tr><td>I</td><td>I</td><td>O</td><td>FF/REW</td></tr>
<tr><td>I</td><td>I</td><td>I</td><td>INTERMEDIATE</td></tr>
</table>
(*1) The Pinch Roller is on the Capstan motor shaft.</td></tr>
<tr><td>32</td><td>I</td><td>POS.SW2</td></tr>
<tr><td>33</td><td>I</td><td>POS.SW1</td></tr>
<tr><td>34</td><td>I</td><td>GND</td><td>GND.</td></tr>
<tr><td>35</td><td>I</td><td>GND</td><td>GND.</td></tr>
<tr><td>36</td><td>O</td><td>16M.START(H)</td><td>Control signal of 16 MHz Oscillator.</td></tr>
<tr><td>37</td><td>-</td><td>5V(D)</td><td>Digital 5V.</td></tr>
<tr><td>38</td><td>I</td><td>16MHz.IN</td><td>Oscillator input.</td></tr>
<tr><td>39</td><td>O</td><td>16MHz.OUT</td><td>Oscillator output.</td></tr>
<tr><td>40</td><td>-</td><td>GND(OSC)</td><td>Oscillator GND.</td></tr>
<tr><td>41</td><td>I</td><td>32KHz.IN</td><td>Oscillator input.</td></tr>
<tr><td>42</td><td>O</td><td>32KHz.OUT</td><td>Oscillator output.</td></tr>
<tr><td>43</td><td>I</td><td>RESET(L)</td><td>Reset low input.</td></tr>
<tr><td>44</td><td>O</td><td>FIP(L)</td><td>FIP on/off control.</td></tr>
<tr><td>45</td><td>O</td><td>FIP/OSD CS</td><td>Chip Select terminal for FIP driver & OSD u-com.</td></tr>
<tr><td>46</td><td>O</td><td>CAL(H)</td><td>Auto-adjustment of Audio IC is in progress, this terminal goes to hight.</td></tr>
<tr><td>47</td><td>I</td><td>POWER KEY (H)</td><td>Power on/off key input.</td></tr>
<tr><td>48</td><td>I</td><td>STAB (L)</td><td>This port receives low when inserting the cassette tape with safety tab.</td></tr>
</table>

Fig. MP2

Pin No.	In/Out	Port Name	Function
49	O	AI MES(H)	AI REC mesurement is in progresss, this terminal goes to high.
50	O	HALF WAVE(H)	Capstan driver selection.
51	O	P.OFF(H)	Power off high output.
52	O	EX. FF/REW (L)	This port supplies low during except FF and REW modes.
53	O	Not used	This terminal keeps Low signal.
54	O	Not used	This terminal keeps Low signal.
55	O	UNLOADING(H)	This port supplies high during the mechanism is unloaded.
56	O	LOADING(H)	This port supplies high during the mechanism is loaded.
57	O	LP (H)	Tape speed output.
58	O	SLEEP(L)	Super power save mode setting terminal.
59	O	PAL-I/BG/DK	System 4 I/L: High D/K: Impedance B/G: Low
60	O	SECAM/PAL	System 2 SECAM: Low OTHERS: High
61	O	NTSC(L)	System 5 60 Hz: Low 50 Hz: High
62	O	YMO	This terminal keeps Low signal.
63	O	Not used	This terminal keeps Low signal.
64	O	Not used	This terminal keeps Low signal.
65	O	T2.DATA.OUT	EDIT 5pin data output factory.
66	I	T2.DATA.IN	EDIT 6pin data clock output for factory.
67	O	T2.CLOCK	EDIT 7pin data input for factory.
68	O	T-BUS/IC.OUT	The Serial data output for OSD microprocessor and FIP driver.
69	I	T-BUS/IC.IN	The Serial data input for OSD microprocessor and FIP driver.
70	O	T-BUS/IC.CLK	The Serial clock output for OSD microprocessor and FIP driver.
71	O	IIC.CLOCK	Tuner and HI-FI audio IC serial clock output.
72	I/O	IIC.DATA	Tuner and HI-FI audio IC serial data input/output.
73	O	125Hz	Oscillator output for main clock adjustment.
74	O	Not used	This terminal keeps Low signal.
75	I	POWER FAIL(L)	Power failure detection.
76	O	CAP.R/F	Capstan rotation direction control. Reverse : High Forward : Low
77	O	CAP.ET	Capstan torque control.
78	O	CYL.ET	Cylinder torque control.
79	I	S.REEL.PULSE	Supply reel pulse input.
80	I	T.REEL.PULSE	Take-up reel pulse input.
81	I	Not used	Not used

Fig. MP3

Pin No.	In/Out	Port Name	Function
82	O	Not used	Not used
83	I	SHORT DN	DC voltage (BIAS (H)) detection. When detecting High at BIAS (H) during BIAS (H) is set to except high, complsory power is turned off (Self test indication display F08). When detecting Low at BIAS (H) during BAIS (H) is set to high, complsory power is turned off (Self test indication display F07).
84	I	C. SYNC	Composite sync signal input.
85	I	CAP.FG	Capstan FG input.
86	I	CYL.PFG	Cylinder PFG input.
87	I	SECAM24(H)	Video head selection input. In SECAM model, this port is high when using 24u head chip for LP mode is mounted on the cylinder.
88	-	GND	GND.
89	O	OREF	Op amp output for 1/2 VDD reference.
90	I	IREF	Op amp input for 1/2 VDD reference.
91	I	CTL.HEAD(-)	Control signal (-) input.
92	I	CTL.HEAD(+)	Control signal (+) input.
93	O	CTL.AMP.SW	Control amp switching output.
94	I	CTL.AMP.IN	Control amp input.
95	I	CTL.AMP.REF	Control amp reference input.
96	-	CTL.AMP.GND	Control amp GND.
97	O	PB.CTL.OUT	Playback Control signal output.
98	-	5V(A)	Analog 5V.
99	-	5V(AD)	5V.
100	O	Not used	This terminal Low signal.

Fig. MP4

6.2. TRUTH TABLE (EG/EGM/EGY MODEL)

INPUT CONDITION							OUTPUT RESULT					
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	RGB SW	VCR IN	VCR OUT
P.OFF	---	---	---	---	---	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
VPS STAND BY	EXT	---	---	L	NORMAL TUN	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
					C+ TUNER	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
					AV1	L	AV2 IN	AV1 IN	L	OFF	AV1	AV1
						H	AV2 IN	AV1 IN	H	ON	AV1	AV1
					AV2	L	AV2 IN	AV1 IN	L	OFF	AV2	AV2
						H	AV2 IN	AV1 IN	H	ON	AV2	AV2
					AV3	L	AV2 IN	AV1 IN	L	OFF	AV3	AV3
						H	AV2 IN	AV1 IN	H	ON	AV3	AV3
					SAT.NOR TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
						H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
						H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
				H	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					C+ TUNER	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
						H	VTR OUT	AV1 IN	H	OFF	AV1	AV1
					AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
						H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
	DECODER	---	---	L	NORMAL TUN	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
					C+ TUNER	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
					AV1	L	AV2 IN	AV1 IN	L	OFF	AV1	AV1
						H	AV2 IN	AV1 IN	H	ON	AV2	AV2
					AV2	L	AV2 IN	AV1 IN	L	OFF	AV2	AV2
						H	AV2 IN	AV1 IN	H	ON	AV2	AV2
					AV3	L	AV2 IN	AV1 IN	L	OFF	AV3	AV3
						H	AV2 IN	AV1 IN	H	ON	AV3	AV3
					SAT.NOR TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
						H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
						H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
				H	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					C+ TUNER	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
						H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN

INPUT CONDITION							OUTPUT RESULT					
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	EXT	TV	EE	L	NORMAL TUN	---	VTR OUT	VTR OUT	L	OFF	TUN	TUN
					C+ TUNER	---	VTR OUT	VTR OUT	L	OFF	TUN	TUN
					AV1	---	VTR OUT	VTR OUT	L	OFF	AV1	AV1
					AV2	---	VTR OUT	VTR OUT	L	ON	AV2	AV2
					AV3	---	VTR OUT	VTR OUT	L	OFF	AV3	AV3
					SAT.NOR TUN	---	VTR OUT	VTR OUT	L	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	---	VTR OUT	VTR OUT	L	OFF	SAT.TUN	SAT.TUN
				H	NORMAL TUN	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					C+ TUNER	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					AV1	---	VTR OUT	VTR OUT	H	OFF	AV1	AV1
					AV2	---	VTR OUT	VTR OUT	H	ON	AV2	AV2
					AV3	---	VTR OUT	VTR OUT	H	OFF	AV3	AV3
					SAT.NOR TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
		VTR	EE	L	NORMAL TUN	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					C+ TUNER	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					AV1	---	VTR OUT	VTR OUT	H	OFF	AV1	AV1
					AV2	---	VTR OUT	VTR OUT	H	ON	AV2	AV2
					AV3	---	VTR OUT	VTR OUT	H	OFF	AV3	AV3
					SAT.NOR TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
				H	NORMAL TUN	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					C+ TUNER	---	VTR OUT	VTR OUT	H	OFF	TUN	TUN
					AV1	---	VTR OUT	VTR OUT	H	OFF	AV1	AV1
					AV2	---	VTR OUT	VTR OUT	H	ON	AV2	AV2
					AV3	---	VTR OUT	VTR OUT	H	OFF	AV3	AV3
					SAT.NOR TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
			VV	---	NORMAL TUN	---	VTR OUT	VTR OUT	H	OFF	TUN	PB
					C+ TUNER	---	VTR OUT	VTR OUT	H	OFF	TUN	PB
					AV1	---	VTR OUT	VTR OUT	H	OFF	AV1	PB
					AV2	---	VTR OUT	VTR OUT	H	OFF	AV2	PB
					AV3	---	VTR OUT	VTR OUT	H	OFF	AV3	PB
					SAT.NOR TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	PB
					SAT.C+ TUN	---	VTR OUT	VTR OUT	H	OFF	SAT.TUN	PB
	DECODER	TV	EE	L	NORMAL TUN	L	VTR OUT	AV1 IN	L	OFF	TUN	TUN
						H	AV2 IN	AV1 IN	H	ON	TUN	TUN
					C+ TUNER	L	VTR OUT	TUN IN	L	OFF	TUN	TUN
						H	VTR OUT	TUN IN	L	OFF	AV2	AV2
					AV1	L	VTR OUT	AV1 IN	L	OFF	AV1	AV1
						H	AV2 IN	AV1 IN	H	ON	AV2	AV2
					AV2	L	VTR OUT	AV1 IN	L	ON	AV2	AV2
						H	AV2 IN	AV1 IN	H	ON	AV2	AV2
					AV3	L	VTR OUT	AV1 IN	L	OFF	AV3	AV3
						H	AV2 IN	AV1 IN	H	ON	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
						H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	SAT IN	L	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	SAT IN	L	OFF	AV2	AV2
				H	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					C+ TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	TUN
						H	VTR OUT	TUN IN	H	ON	AV2	AV2
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2

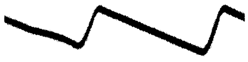
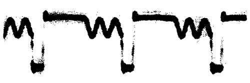
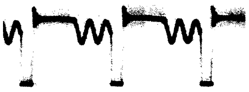
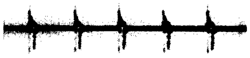
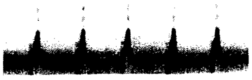
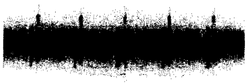
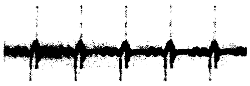
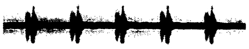
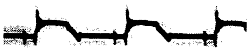
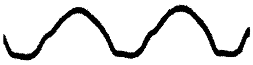
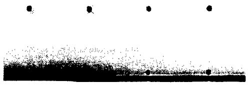
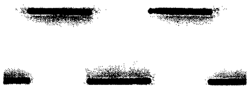
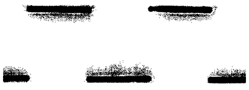
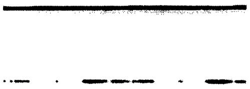
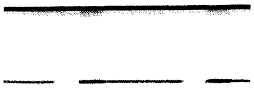
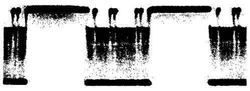
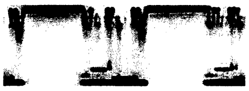
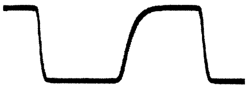
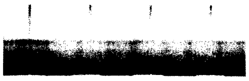
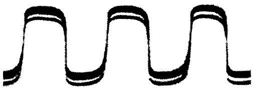
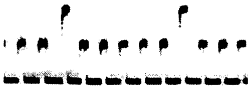
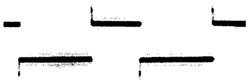
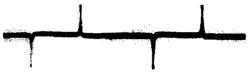
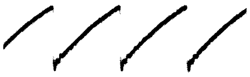
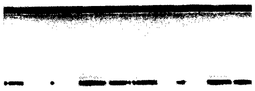
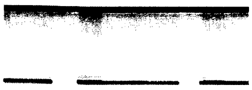
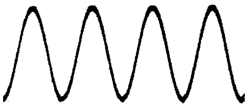
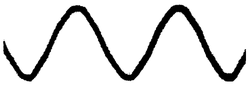
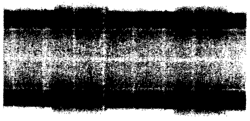
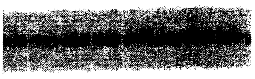
INPUT CONDITION							OUTPUT RESULT					
POWER	AV2 SELECT	TV/ VTR	EE/ VV	OSD ON(H)	INPUT CH	AV2 PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	DECODER	TV	EE	H	AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
						H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	SAT IN	H	ON	AV2	AV2
		VTR	EE	L	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					C+ TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	TUN
						H	VTR OUT	TUN IN	H	ON	AV2	AV2
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV 3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
						H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	SAT IN	H	ON	AV2	AV2
				H	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
						H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					C+ TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	TUN
						H	VTR OUT	TUN IN	H	ON	AV2	AV2
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
						H	VTR OUT	AV1 IN	H	ON	AV2	AV2
					AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
						H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					SAT.C+ TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	SAT.TUN
						H	VTR OUT	SAT IN	H	ON	AV2	AV2
			VV	---	NORMAL TUN	L	VTR OUT	AV1 IN	H	OFF	TUN	PB
						H	VTR OUT	AV1 IN	H	OFF	TUN	PB
					C+ TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	PB
						H	VTR OUT	TUN IN	H	OFF	AV2	PB
					AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	PB
						H	VTR OUT	AV1 IN	H	OFF	AV2	PB
					AV2	L	VTR OUT	AV1 IN	H	OFF	AV2	PB
						H	VTR OUT	AV1 IN	H	OFF	AV2	PB
					AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	PB
						H	VTR OUT	AV1 IN	H	OFF	AV3	PB
					SAT.NOR TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	PB
						H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	PB
					SAT.C+ TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	PB
						H	VTR OUT	SAT IN	H	OFF	AV2	PB

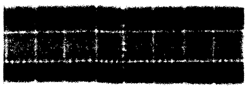
6.3. TRUTH TABLE (B MODEL)

INPUT CONDITION						OUTPUT RESULT					
POWER	AV2 SELECT	EE/VV	OSD ON(H)	INPUT CH	AV PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	RGB SW	VCR IN	VCR OUT
P.OFF	----	----	----	----	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
					H	AV2 IN	AV1 IN	H	ON	TUN	TUN
PDC STAND BY	EXT	----	L	TUNER	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
					H	AV2 IN	AV1 IN	H	ON	TUN	TUN
				AV1	L	AV2 IN	AV1 IN	L	OFF	AV1	AV1
					H	AV2 IN	AV1 IN	H	ON	AV1	AV1
				AV2	L	AV2 IN	AV1 IN	L	OFF	AV2	AV2
					H	AV2 IN	AV1 IN	H	ON	AV2	AV2
				AV3	L	AV2 IN	AV1 IN	L	OFF	AV3	AV3
					H	AV2 IN	AV1 IN	H	ON	AV3	AV3
				SAT.TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
					H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
			H	TUNER	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
				AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
					H	VTR OUT	AV1 IN	H	OFF	AV1	AV1
				AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
					H	VTR OUT	AV1 IN	H	ON	AV2	AV2
				AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
				SAT.TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
	DECODER	----	L	TUNER	L	AV2 IN	AV1 IN	L	OFF	TUN	TUN
					H	AV2 IN	AV1 IN	H	ON	TUN	TUN
				AV1	L	AV2 IN	AV1 IN	L	OFF	AV1	AV1
					H	AV2 IN	AV1 IN	H	ON	AV2	AV2
				AV2	L	AV2 IN	AV1 IN	L	OFF	AV2	AV2
					H	AV2 IN	AV1 IN	H	ON	AV2	AV2
				AV3	L	AV2 IN	AV1 IN	L	OFF	AV3	AV3
					H	AV2 IN	AV1 IN	H	ON	AV3	AV3
				SAT.TUN	L	AV2 IN	AV1 IN	L	OFF	SAT.TUN	SAT.TUN
					H	AV2 IN	AV1 IN	H	ON	SAT.TUN	SAT.TUN
			H	TUNER	L	VTR OUT	AV1 IN	H	OFF	TUN	TUN
					H	VTR OUT	AV1 IN	H	OFF	TUN	TUN
				AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
					H	VTR OUT	AV1 IN	H	ON	AV2	AV2
				AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
					H	VTR OUT	AV1 IN	H	ON	AV2	AV2
				AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
				SAT.TUN	L	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN
					H	VTR OUT	AV1 IN	H	OFF	SAT.TUN	SAT.TUN

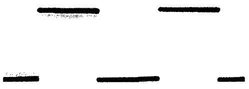
INPUT CONDITION						OUTPUT RESULT					
POWER	AV2 SELECT	EE/VV	OSD ON(H)	INPUT CH	AV PB(H)	AV1 OUT	AV2 OUT	AV1 PB(H)	RGB SW	VCR IN	VCR OUT
P.ON	EXT	EE	L	TUNER	----	VTR OUT	VTR OUT	L	OFF	TUN	TUN
				AV1	----	VTR OUT	VTR OUT	L	OFF	AV1	AV1
				AV2	----	VTR OUT	VTR OUT	L	ON	AV2	AV2
				AV3	----	VTR OUT	VTR OUT	L	OFF	AV3	AV3
				SAT.TUN	----	VTR OUT	VTR OUT	L	OFF	SAT.TUN	SAT.TUN
			H	TUNER	----	VTR OUT	VTR OUT	H	OFF	TUN	TUN
				AV1	----	VTR OUT	VTR OUT	H	OFF	AV1	AV1
				AV2	----	VTR OUT	VTR OUT	H	ON	AV2	AV2
				AV3	----	VTR OUT	VTR OUT	H	OFF	AV3	AV3
				SAT.TUN	----	VTR OUT	VTR OUT	H	OFF	SAT.TUN	SAT.TUN
		VV	----	TUNER	----	VTR OUT	VTR OUT	H	OFF	TUN	PB
				AV1	----	VTR OUT	VTR OUT	H	OFF	AV1	PB
				AV2	----	VTR OUT	VTR OUT	H	OFF	AV2	PB
				AV3	----	VTR OUT	VTR OUT	H	OFF	AV3	PB
				SAT.TUN	----	VTR OUT	VTR OUT	H	OFF	SAT.TUN	PB
	DECODER	EE	L	TUNER	L	VTR OUT	TUN IN	L	OFF	TUN	TUN
					H	VTR OUT	TUN IN	L	ON	AV2	AV2
				AV1	L	VTR OUT	AV1 IN	L	OFF	AV1	AV1
					H	VTR OUT	AV1 IN	L	ON	AV2	AV2
				AV2	L	VTR OUT	AV1 IN	L	ON	AV2	AV2
					H	VTR OUT	AV1 IN	L	ON	AV2	AV2
				AV3	L	VTR OUT	AV1 IN	L	OFF	AV3	AV3
					H	VTR OUT	AV1 IN	L	OFF	AV3	AV3
				SAT.TUN	L	VTR OUT	SAT IN	L	OFF	SAT.TUN	SAT.TUN
					H	VTR OUT	SAT IN	L	ON	AV2	AV2
			H	TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	TUN
					H	VTR OUT	TUN IN	H	ON	AV2	AV2
				AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	AV1
					H	VTR OUT	AV1 IN	H	ON	AV2	AV2
				AV2	L	VTR OUT	AV1 IN	H	ON	AV2	AV2
					H	VTR OUT	AV1 IN	H	ON	AV2	AV2
				AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	AV3
					H	VTR OUT	AV1 IN	H	OFF	AV3	AV3
				SAT.TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	SAT.TUN
					H	VTR OUT	SAT IN	H	ON	AV2	AV2
		VV	----	TUNER	L	VTR OUT	TUN IN	H	OFF	TUN	PB
					H	VTR OUT	TUN IN	H	OFF	AV2	PB
				AV1	L	VTR OUT	AV1 IN	H	OFF	AV1	PB
					H	VTR OUT	AV1 IN	H	OFF	AV2	PB
				AV2	L	VTR OUT	AV1 IN	H	OFF	AV2	PB
					H	VTR OUT	AV1 IN	H	OFF	AV2	PB
				AV3	L	VTR OUT	AV1 IN	H	OFF	AV3	PB
					H	VTR OUT	AV1 IN	H	OFF	AV3	PB
				SAT.TUN	L	VTR OUT	SAT IN	H	OFF	SAT.TUN	PB
					H	VTR OUT	SAT IN	H	OFF	AV2	PB

7 WAVEFORM TABLE

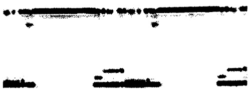
 T1101-3 STOP 8.0Vp-p (2msec. div.)	 T1101-7 STOP 100Vp-p (5μsec. div.)	 IC1101-1 STOP 500Vp-p (5μsec. div.)	 IC1101-2 STOP 11Vp-p (10μsec. div.)	 IC1101-4 STOP 0.8Vp-p (10μsec. div.)
 IC1101-5 STOP 1.4Vp-p (10μsec. div.)	 IC1101-6 STOP 4.0Vp-p (10μsec. div.)	 IC1101-7 STOP 0.6Vp-p (10μsec. div.)	 Q1111-1 STOP 0.5Vp-p (5μsec. div.)	 IC2502-1,2,16 REC 9.0Vp-p (2msec. div.)
 IC6001-13 PAUSE 4.8Vp-p (10msec. div.)	 IC6001-15 REC 4.8Vp-p (10msec. div.)	 IC6001-18 REC 5.0Vp-p (10msec. div.)	 IC6001-68,69 REC 5.0Vp-p (5msec. div.)	 IC6001-70 REC 5.0Vp-p (5msec. div.)
 IC6001-71 REC 5.0Vp-p (5msec. div.)	 IC6001-72 REC 5.0Vp-p (5msec. div.)	 IC6001-79,80 FF/REW 5.0Vp-p (1msec. div.)	 IC6001-84 REC 5.0Vp-p (10msec. div.)	 IC6001-85 REC 0.8Vp-p (5msec. div.)
 IC6001-86 REC 5.0Vp-p (10msec. div.)	 IC6001-91,92 REC 6.0Vp-p (10msec. div.)	 IC6001-97 PLAY 4.2Vp-p (10msec. div.)	 IC7501-4 STOP 2.2Vp-p (0.2μsec. div.)	 IC7501-13,14 STOP 5.0Vp-p (5msec. div.)
 IC7501-15 STOP 5.0Vp-p (5msec. div.)	 IC3001-2 REC 1.5Vp-p (5msec. div.)	 IC3001-4 STOP 5.0Vp-p (5msec. div.)	 IC3001-14 REC 0.4Vp-p (5msec. div.)	 IC3001-15 STOP 0.6Vp-p (20μsec. div.)



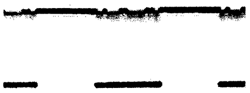
IC3001-20 PLAY
150mVp-p (20μsec. div.)



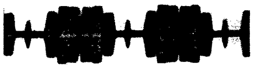
IC3001-24 REC/PLAY
5.0Vp-p (10msec. div.)



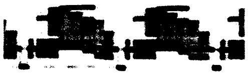
IC3001-37 REC/PLAY
5.0Vp-p (5msec. div.)



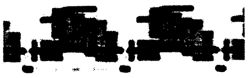
IC3001-38 REC/PLAY
5.0Vp-p (5msec. div.)



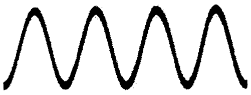
IC3001-42,43 PLAY
0.4Vp-p (20μsec. div.)



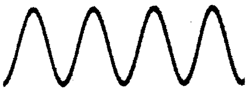
IC3001-48,50 REC
1.0Vp-p (20μsec. div.)



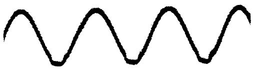
IC3001-52 REC/PLAY
2.0Vp-p (20μsec. div.)



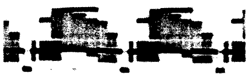
IC3001-73 REC
1.2Vp-p (5msec. div.)



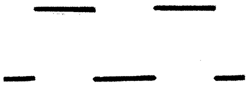
IC3001-78 REC/PLAY
1.2Vp-p (5msec. div.)



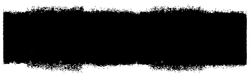
Q4005-C REC
Q4007-C REC
9.0Vp-p (5μsec. div.)



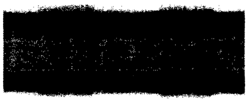
PP7701-4,6 REC/PLAY
2.0Vp-p (20μsec. div.)



IC3501-1 REC/PLAY
5.0Vp-p (10msec. div.)



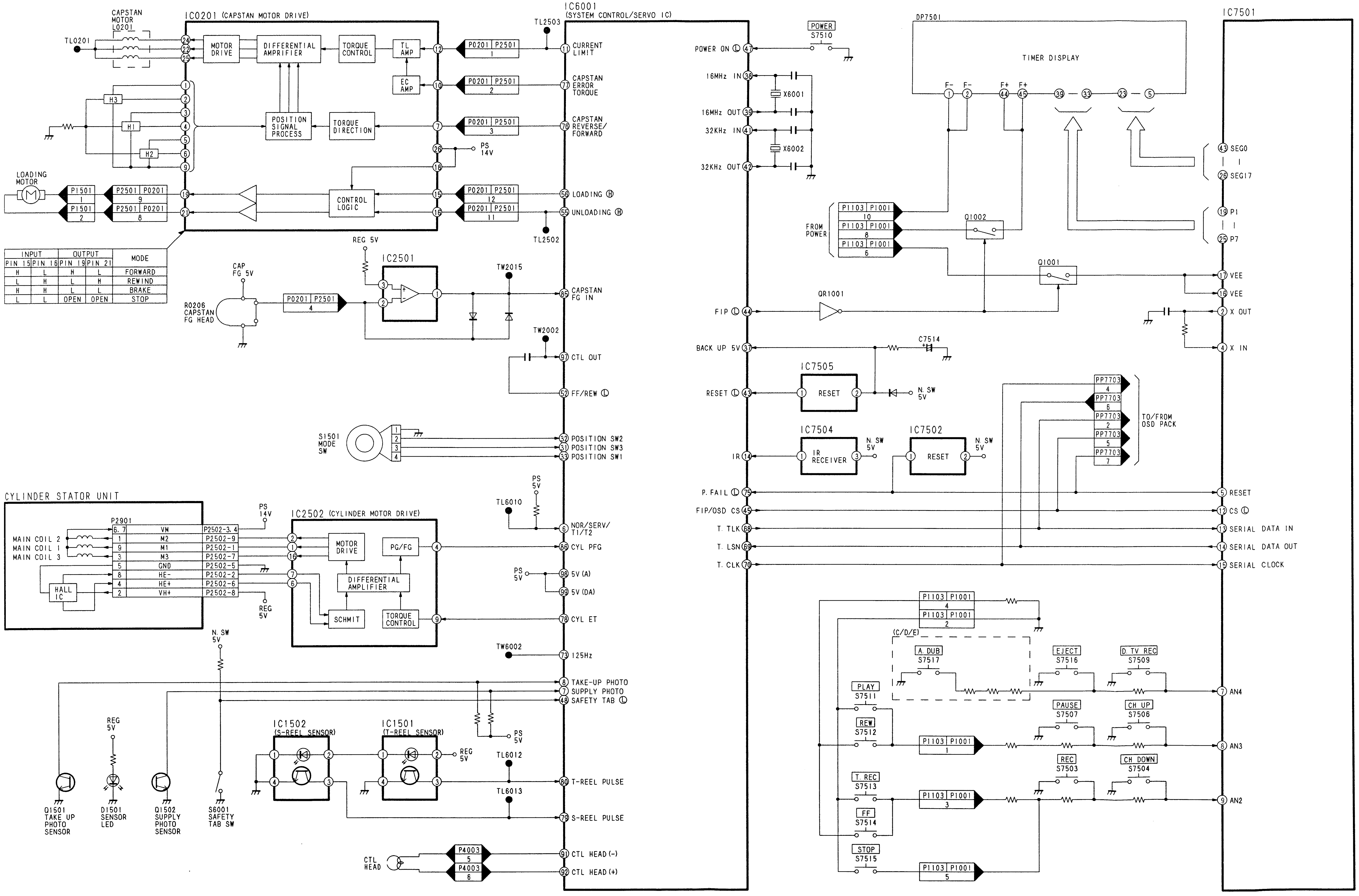
IC3501-30 PLAY
0.4Vp-p (5msec. div.)



IC3501-31 REC
0.3Vp-p (5msec. div.)

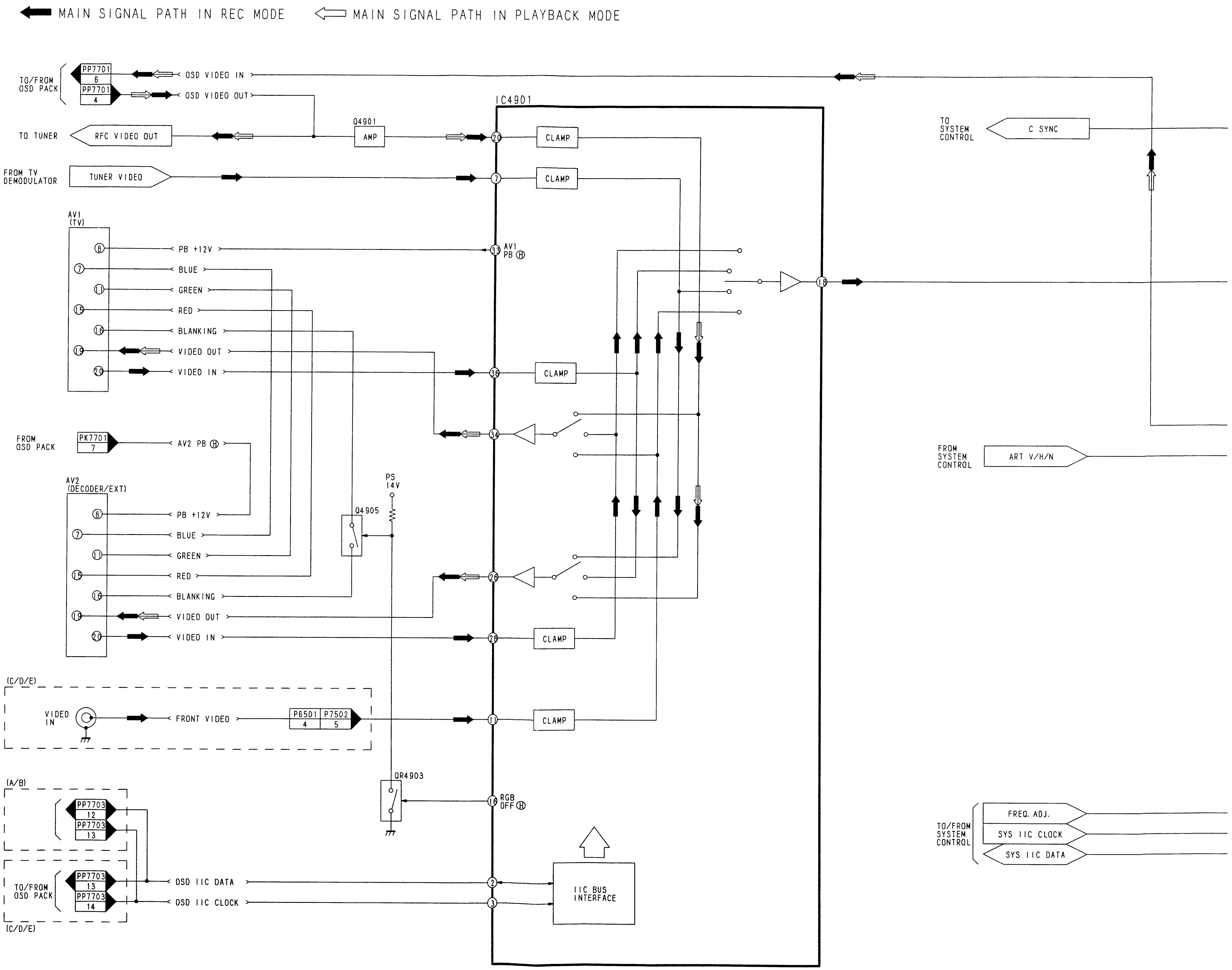
8 BLOCK DIAGRAMS

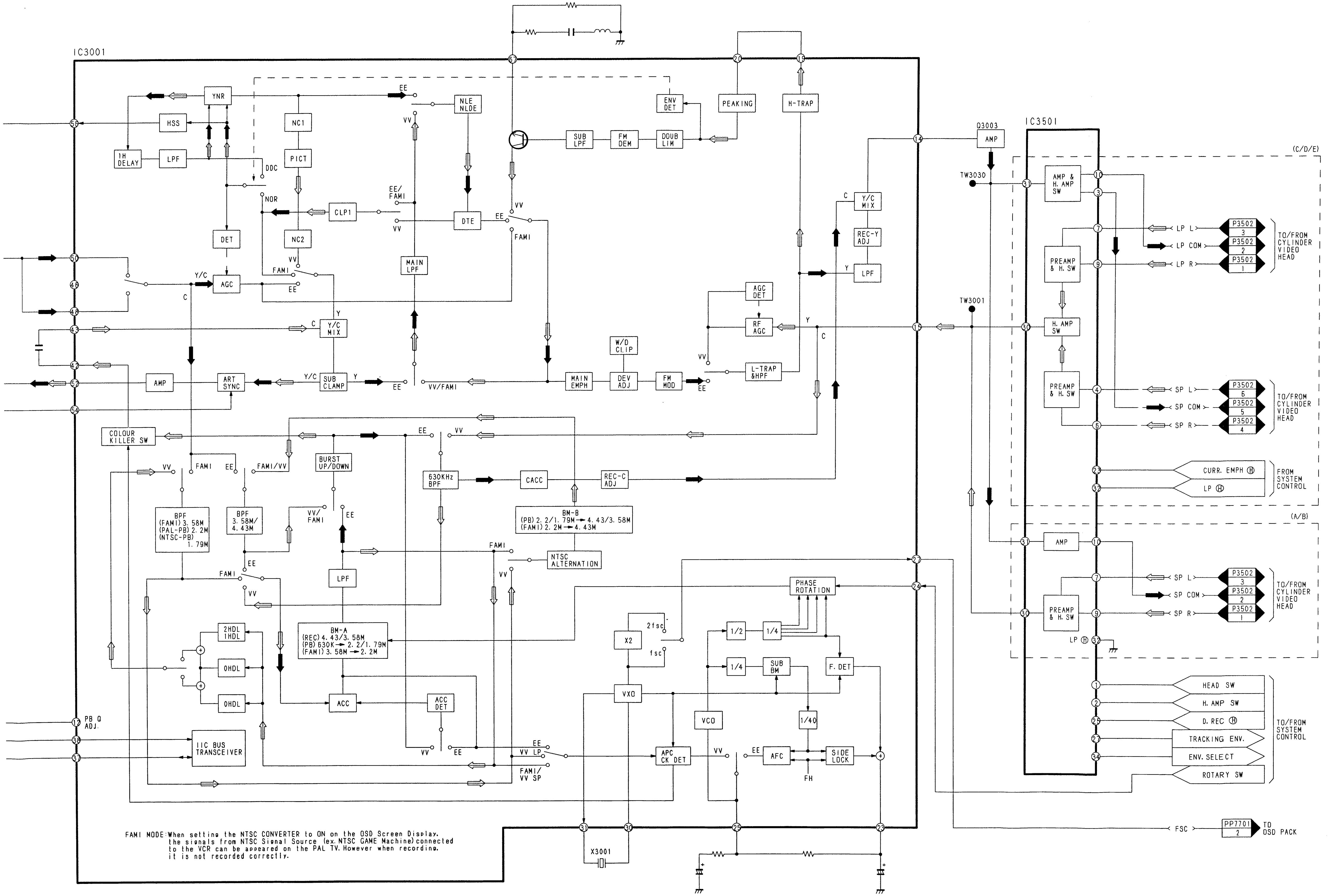
8.1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM


IC0201 (CAPSTAN MOTOR DRIVE)
CAPSTAN MOTOR L0201
TL0201
MOTOR DRIVE
DIFFERENTIAL AMPRIFIER
TORQUE CONTROL
TL AMP
EC AMP
POSITION SIGNAL PROCESS
TORQUE DIRECTION
CONTROL LOGIC
H1
H2
H3
PS 14V
LOADING MOTOR
P1501
P2501
P0201
REG 5V
IC2501
CAP FG 5V
R0206 CAPSTAN FG HEAD
TW2015
TW2002
TL2502
TL2503
IC6001 (SYSTEM CONTROL/SERVO IC)
CURRENT LIMIT
CAPSTAN ERROR TORQUE
CAPSTAN REVERSE/FORWARD
LOADING Ⓗ
UNLOADING Ⓗ
CAPSTAN FG IN
CTL OUT
FF/REW Ⓛ
S1501 MODE SW
POSITION SW2
POSITION SW3
POSITION SW1
CYLINDER STATOR UNIT
P2901
MAIN COIL 2
MAIN COIL 1
MAIN COIL 3
HALL IC
VM
M2
M1
M3
GND
HE-
HE+
VH+
P2502-3, 4
P2502-9
P2502-1
P2502-7
P2502-5
P2502-2
P2502-6
P2502-8
IC2502 (CYLINDER MOTOR DRIVE)
PG/FG
DIFFERENTIAL AMPLIFIER
SCHMIT
TORQUE CONTROL
TL6010
PS 5V
NOR/SERV/T1/T2
CYL PFG
5V (A)
5V (DA)
CYL ET
TW6002
125Hz
N. SW 5V
TAKE-UP PHOTO
SUPPLY PHOTO
SAFETY TAB Ⓛ
IC1502 (S-REEL SENSOR)
IC1501 (T-REEL SENSOR)
TL6012
TL6013
T-REEL PULSE
S-REEL PULSE
Q1501 TAKE UP PHOTO SENSOR
D1501 SENSOR LED
Q1502 SUPPLY PHOTO SENSOR
S6001 SAFETY TAB SW
CTL HEAD
P4003
CTL HEAD (-)
CTL HEAD (+)
POWER S7510
POWER ON Ⓛ
16MHz IN
16MHz OUT
32KHz IN
32KHz OUT
X6001
X6002
FROM POWER
P1103
P1001
FIP Ⓛ
QR1001
BACK UP 5V
C7514
IC7505
RESET
RESET Ⓛ
N. SW 5V
IC7504
IR RECEIVER
IR
IC7502
P. FAIL Ⓛ
FIP/OSD CS
T. TLK
T. LSN
T. CLK
DP7501
TIMER DISPLAY
F-
F+
Q1002
Q1001
PP7703
TO/FROM OSD PACK
IC7501
SEG0
SEG17
P1
P7
VEE
X OUT
X IN
RESET
CS Ⓛ
SERIAL DATA IN
SERIAL DATA OUT
SERIAL CLOCK
(C/D/E)
A. DUB S7517
EJECT S7516
D. TV REC S7509
PLAY S7511
PAUSE S7507
CH UP S7506
REW S7512
REC S7503
CH DOWN S7504
T. REC S7513
FF S7514
STOP S7515
AN4
AN3
AN2

INPUT		OUTPUT		MODE
PIN 15	PIN 16	PIN 19	PIN 21	
H	L	H	L	FORWARD
L	H	L	H	REWIND
H	H	L	L	BRAKE
L	L	OPEN	OPEN	STOP

8.2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM

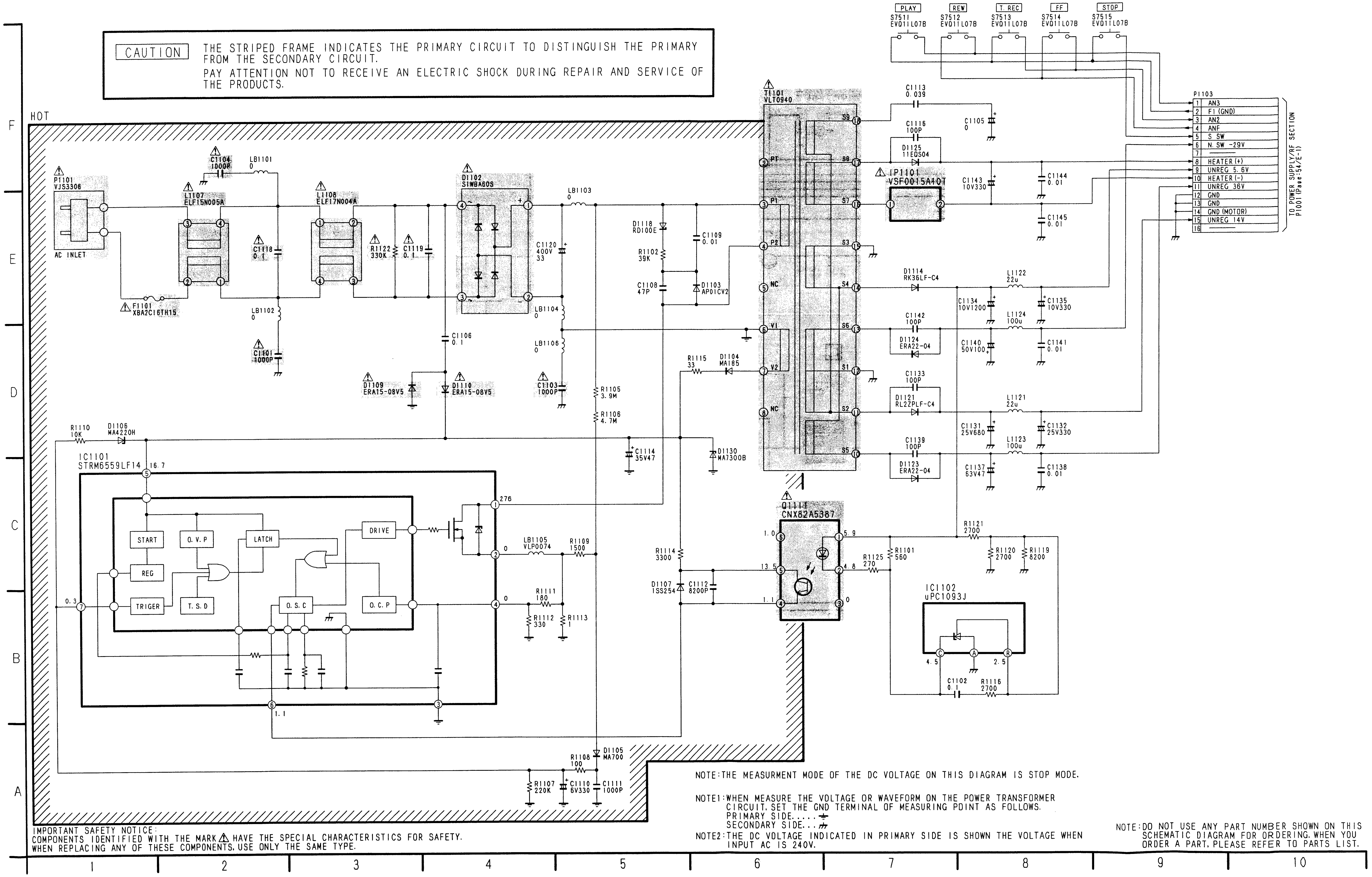

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE
TO/FROM OSD PACK
PP7701 6
PP7701 4
OSD VIDEO IN
OSD VIDEO OUT
IC4901
Q4901
AMP
TO TUNER
RFC VIDEO OUT
20
CLAMP
FROM TV DEMODULATOR
TUNER VIDEO
7
CLAMP
AV1 (TV)
8
7
11
15
16
19
20
PB +12V
BLUE
GREEN
RED
BLANKING
VIDEO OUT
VIDEO IN
33
AV1 PB Ⓗ
18
36
CLAMP
34
FROM OSD PACK
PK7701 7
AV2 PB Ⓗ
AV2 (DECODER/EXT)
PS 14V
Q4905
8
7
11
15
16
19
20
PB +12V
BLUE
GREEN
RED
BLANKING
VIDEO OUT
VIDEO IN
26
28
CLAMP
(C/D/E)
VIDEO IN
FRONT VIDEO
P6501 4
P7502 5
11
CLAMP
QR4903
16
RGB OFF Ⓗ
(A/B)
PP7703 12
PP7703 13
TO/FROM OSD PACK
PP7703 13
PP7703 14
(C/D/E)
OSD IIC DATA
OSD IIC CLOCK
2
3
IIC BUS INTERFACE
TO SYSTEM CONTROL
C SYNC
FROM SYSTEM CONTROL
ART V/H/N
TO/FROM SYSTEM CONTROL
FREQ. ADJ.
SYS IIC CLOCK
SYS IIC DATA


IC3001
YNR
HSS
1H DELAY
LPF
DET
AGC
Y/C
C
DDC
NOR
NC1
PICT
CLP1
NC2
FAMI
EE
VV
EE/FAMI
NLE NLDE
DTE
MAIN LPF
Y/C MIX
SUB CLAMP
ART SYNC
AMP
VV/FAMI
SUB LPF
FM DEM
DOUB LIM
ENV DET
PEAKING
H-TRAP
W/D CLIP
MAIN EMPH
DEV ADJ
FM MOD
AGC DET
RF AGC
L-TRAP &HPF
Y/C MIX
REC-Y ADJ
LPF
COLOUR KILLER SW
FAMI/VV
BURST UP/DOWN
630KHz BPF
CACC
REC-C ADJ
BM-B (PB) 2.2/1.79M → 4.43/3.58M (FAMI) 2.2M → 4.43M
BPF (FAMI) 3.58M (PAL-PB) 2.2M (NTSC-PB) 1.79M
BPF 3.58M/4.43M
VV/FAMI
LPF
NTSC ALTERNATION
BM-A (REC) 4.43/3.58M (PB) 630K → 2.2/1.79M (FAMI) 3.58M → 2.2M
2HDL 1HDL
0HDL
0HDL
ACC
ACC DET
IIC BUS TRANSCEIVER
PB Q ADJ.
EE VV LP
FAMI/VV SP
PHASE ROTATION
2fsc
fsc
X2
1/2
1/4
1/4
SUB BM
F.DET
VXO
VCO
1/40
APC CK DET
AFC
SIDE LOCK
FH
X3001
Q3003
AMP
TW3030
TW3001
IC3501
(C/D/E)
AMP & H.AMP SW
PREAMP & H.SW
H.AMP SW
PREAMP & H.SW
LP L
LP COM
LP R
P3502 3
P3502 2
P3502 1
TO/FROM CYLINDER VIDEO HEAD
SP L
SP COM
SP R
P3502 6
P3502 5
P3502 4
TO/FROM CYLINDER VIDEO HEAD
CURR. EMPH Ⓗ
LP Ⓗ
FROM SYSTEM CONTROL
(A/B)
AMP
PREAMP & H.SW
SP L
SP COM
SP R
P3502 3
P3502 2
P3502 1
TO/FROM CYLINDER VIDEO HEAD
LP Ⓗ
HEAD SW
H.AMP SW
D.REC Ⓗ
TRACKING ENV.
ENV.SELECT
ROTARY SW
TO/FROM SYSTEM CONTROL
FSC
PP7701 2
TO OSD PACK
67
20
19
56
50
46
48
43
42
52
54
14
15
27
24
12
38
37
31
30
25
23
31
10
3
7
9
30
4
6
23
32
31
10
7
9
30
32
1
2
28
27
34

FAMI MODE: When setting the NTSC CONVERTER to ON on the OSD Screen Display. the signals from NTSC Signal Source (ex. NTSC GAME Machine) connected to the VCR can be appeared on the PAL TV. However when recording. it is not recorded correctly.

9 SCHEMATIC DIAGRAMS

9.1. POWER SCHEMATIC DIAGRAM


CAUTION
THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.
HOT
PLAY
S7511
EVQ11L07B
REW
S7512
EVQ11L07B
T.REC
S7513
EVQ11L07B
FF
S7514
EVQ11L07B
STOP
S7515
EVQ11L07B
P1101
VJS3306
AC INLET
C1104
1000P
LB1101
0
L1107
ELF15N005A
L1108
ELF17N004A
D1102
S1WBA60S
LB1103
0
C1118
0.1
R1122
330K
C1119
0.1
C1120
400V
33
F1101
XBA2C16TH15
LB1102
0
LB1104
0
C1106
0.1
LB1106
0
C1101
1000P
D1109
ERA15-08V5
D1110
ERA15-08V5
C1103
1000P
R1105
3.9M
R1106
4.7M
D1118
RD10OE
R1102
39K
C1109
0.01
C1108
47P
D1103
AP01CV2
R1115
33
D1104
MA185
C1114
35V47
D1130
MA7300B
T1101
VLT0940
P1
P2
NC
V1
V2
NC
S9
S8
S7
S3
S4
S6
S1
S2
S5
C1113
0.039
C1116
100P
C1105
0
D1125
11EQS04
IP1101
VSF0015A10T
C1143
10V330
C1144
0.01
C1145
0.01
D1114
RK36LF-C4
L1122
22u
C1134
10V1200
C1135
10V330
C1142
100P
L1124
100u
D1124
ERA22-04
C1140
50V100
C1141
0.01
C1133
100P
D1121
RL2ZPLF-C4
L1121
22u
C1131
25V680
C1132
25V330
C1139
100P
L1123
100u
D1123
ERA22-04
C1137
63V47
C1138
0.01
P1103
1 AN3
2 F1 (GND)
3 AN2
4 ANF
5 S SW
6 N.SW -29V
7
8 HEATER (+)
9 UNREG 5.6V
10 HEATER (-)
11 UNREG 36V
12 GND
13 GND
14 GND (MOTOR)
15 UNREG 14V
16
TO POWER SUPPLY/RF SECTION P1001 (Page:54/E-1)
R1110
10K
D1106
MA4220H
IC1101
STRM6559LF14
16.7
START
O.V.P
LATCH
DRIVE
REG
TRIGER
T.S.D
O.S.C
O.C.P
0.3
276
0
LB1105
VLP0074
R1109
1500
R1111
180
R1112
330
R1113
1
1.1
R1114
3300
D1107
1SS254
C1112
8200P
Q1111
CNX82A5387
1.0
13.5
1.1
5.9
4.8
R1125
270
R1101
560
R1121
2700
R1120
2700
R1119
8200
IC1102
uPC1093J
4.5
2.5
C1102
0.1
R1116
2700
R1108
100
D1105
MA700
R1107
220K
C1110
6V330
C1111
1000P
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

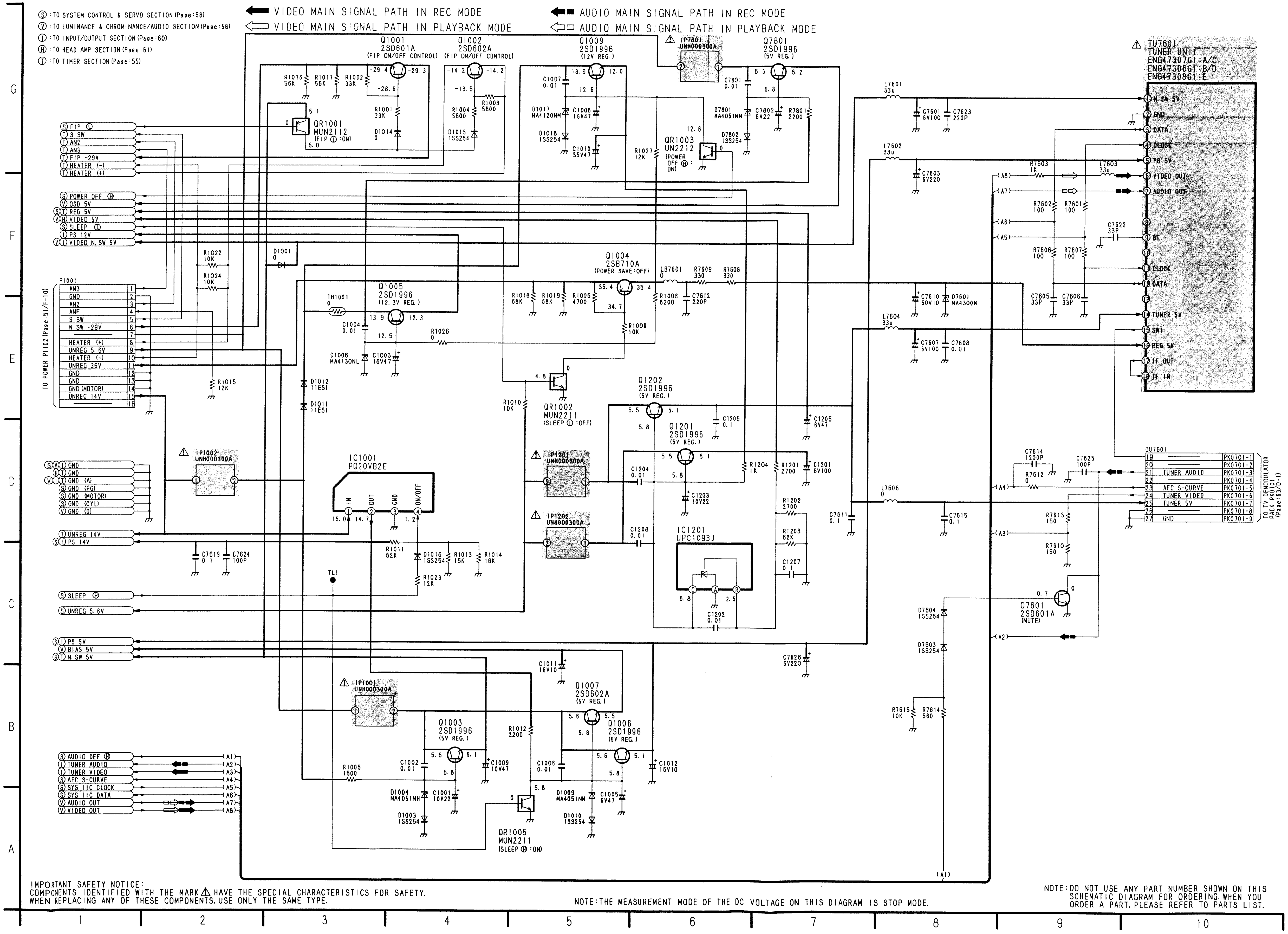
NOTE: THE MEASURMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE1: WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE..... ⏚
SECONDARY SIDE... ⏚

NOTE2: THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.2. POWER SUPPLY/RF SECTION IN MAIN SCHEMATIC DIAGRAM

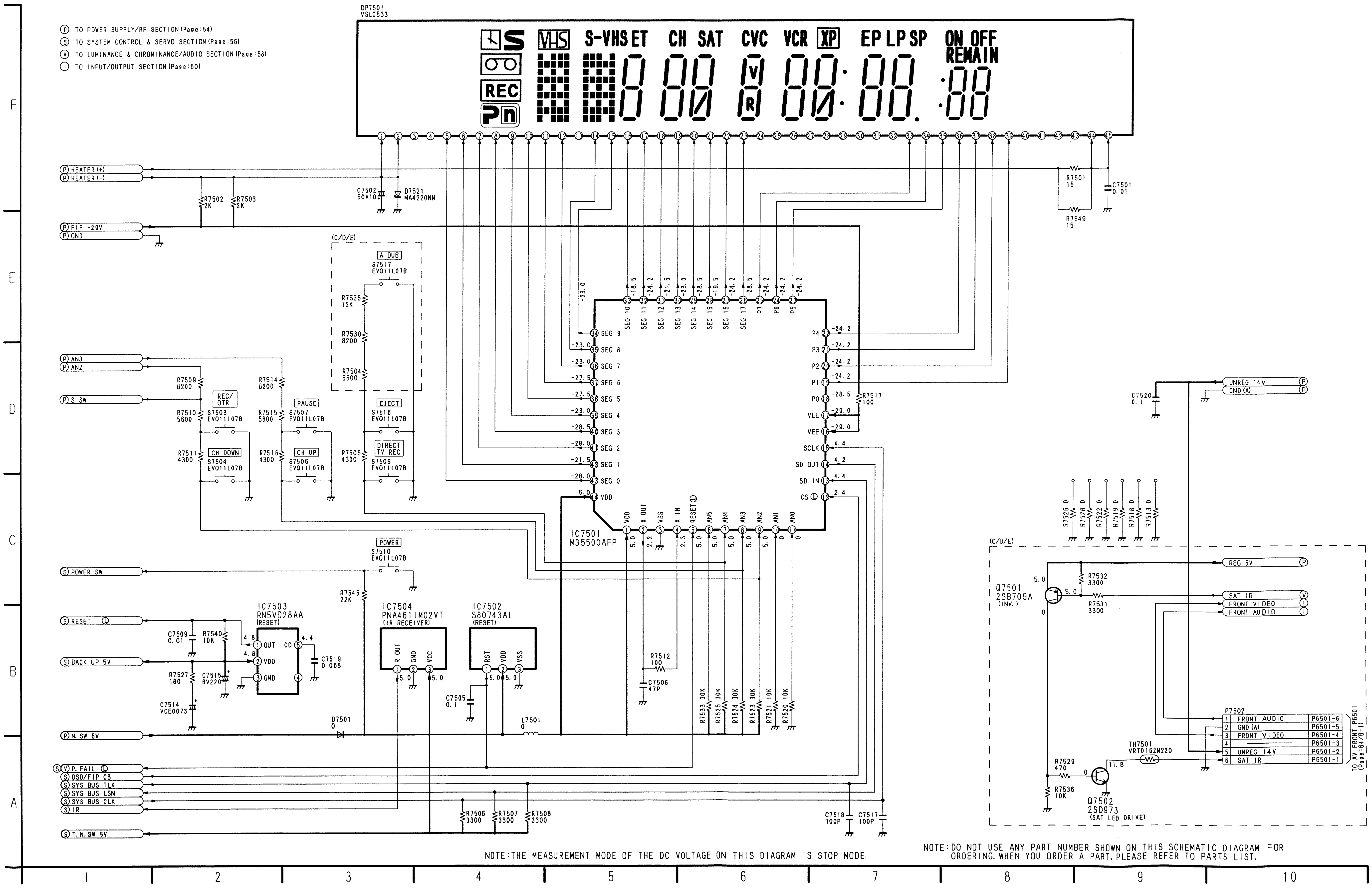

Ⓢ :TO SYSTEM CONTROL & SERVO SECTION (Page:56)
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION (Page:58)
Ⓘ :TO INPUT/OUTPUT SECTION (Page:60)
Ⓗ :TO HEAD AMP SECTION (Page:61)
Ⓣ :TO TIMER SECTION (Page:55)
VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
Q1001 2SD601A (FIP ON/OFF CONTROL)
Q1002 2SD602A (FIP ON/OFF CONTROL)
Q1009 2SD1996 (12V REG.)
IP7801 UNH000300A
Q7801 2SD1996 (5V REG.)
TU7601 TUNER UNIT ENG47307G1 : A/C ENG47306G1 : B/D ENG47308G1 : E
N.SW 5V
GND
DATA
CLOCK
PS 5V
VIDEO OUT
AUDIO OUT
BT
CLOCK
DATA
TUNER 5V
SW1
REG 5V
IF OUT
IF IN
QR1001 MUN2112 (FIP Ⓛ :ON)
QR1003 UN2212 (POWER OFF Ⓗ : ON)
Q1004 2SB710A (POWER SAVE:OFF)
Q1005 2SD1996 (12.3V REG.)
QR1002 MUN2211 (SLEEP Ⓛ :OFF)
Q1202 2SD1996 (5V REG.)
Q1201 2SD1996 (5V REG.)
IC1001 PQ20VB2E
IN OUT GND ON/OFF
IP1002 UNH000300A
IP1201 UNH000300A
IP1202 UNH000300A
IC1201 UPC1093J
IP1001 UNH000300A
Q1003 2SD1996 (5V REG.)
Q1007 2SD602A (5V REG.)
Q1006 2SD1996 (5V REG.)
QR1005 MUN2211 (SLEEP Ⓗ :ON)
Q7601 2SD601A (MUTE)
TL1
P1001 TO POWER P1102 (Page:51/F-10)
AN3
GND
AN2
ANF
S SW
N.SW -29V
HEATER (+)
UNREG 5.6V
HEATER (-)
UNREG 36V
GND
GND
GND (MOTOR)
UNREG 14V
FIP Ⓛ
S SW
AN2
AN3
FIP -29V
HEATER (-)
HEATER (+)
POWER OFF Ⓗ
OSD 5V
REG 5V
VIDEO 5V
SLEEP Ⓛ
PS 12V
VIDEO N.SW 5V
GND
GND
GND (A)
GND (FG)
GND (MOTOR)
GND (CYL)
GND (D)
UNREG 14V
PS 14V
SLEEP Ⓗ
UNREG 5.6V
PS 5V
BIAS 5V
N.SW 5V
AUDIO DEF Ⓗ
TUNER AUDIO
TUNER VIDEO
AFC S-CURVE
SYS IIC CLOCK
SYS IIC DATA
AUDIO OUT
VIDEO OUT
DU7601
TUNER AUDIO
AFC S-CURVE
TUNER VIDEO
TUNER 5V
GND
PK0701-1
PK0701-2
PK0701-3
PK0701-4
PK0701-5
PK0701-6
PK0701-7
PK0701-8
PK0701-9
TO TV DEMODULATOR PACK PK0701 (Page:63/D-1)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

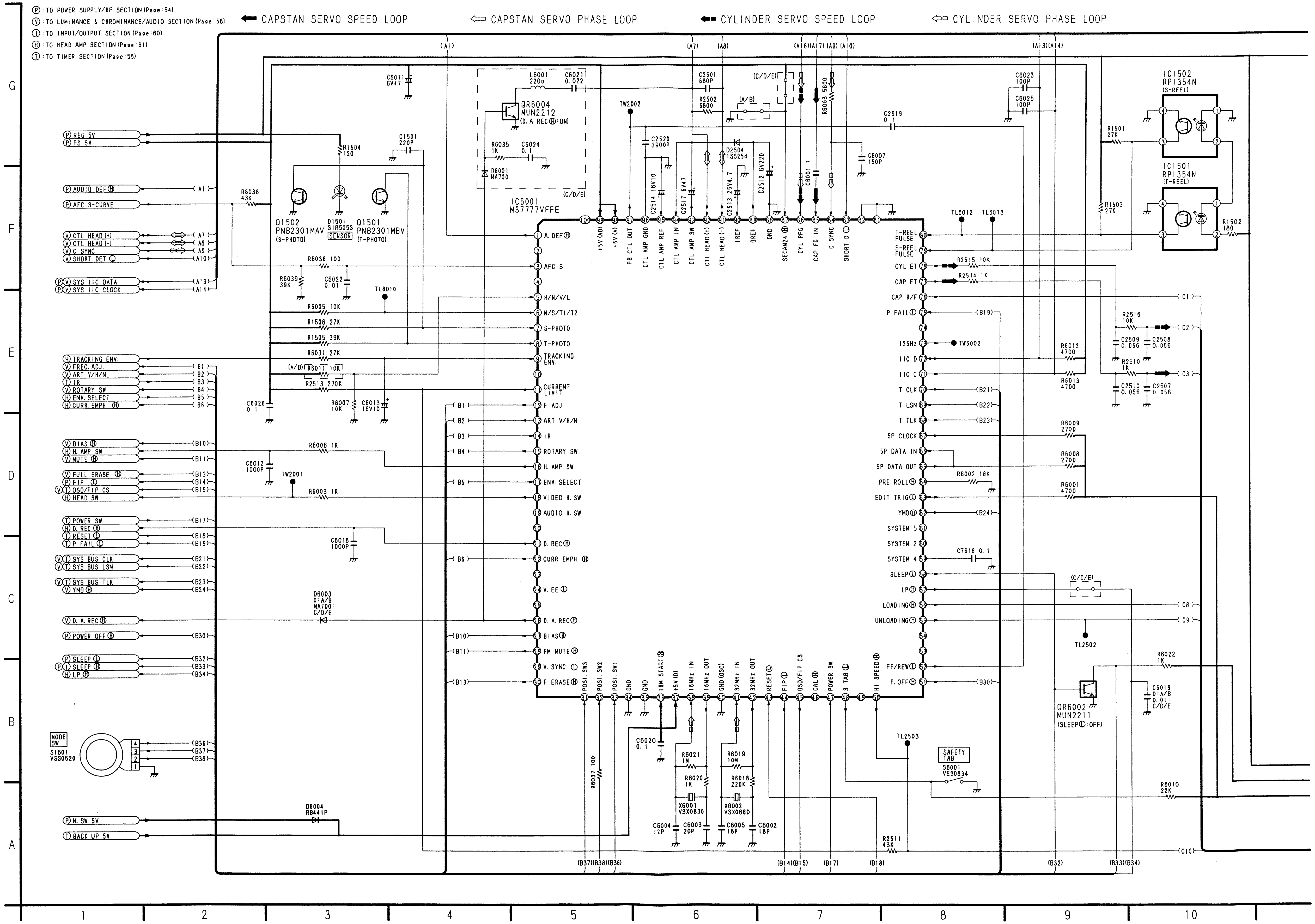
9.3. TIMER SECTION IN MAIN SCHEMATIC DIAGRAM

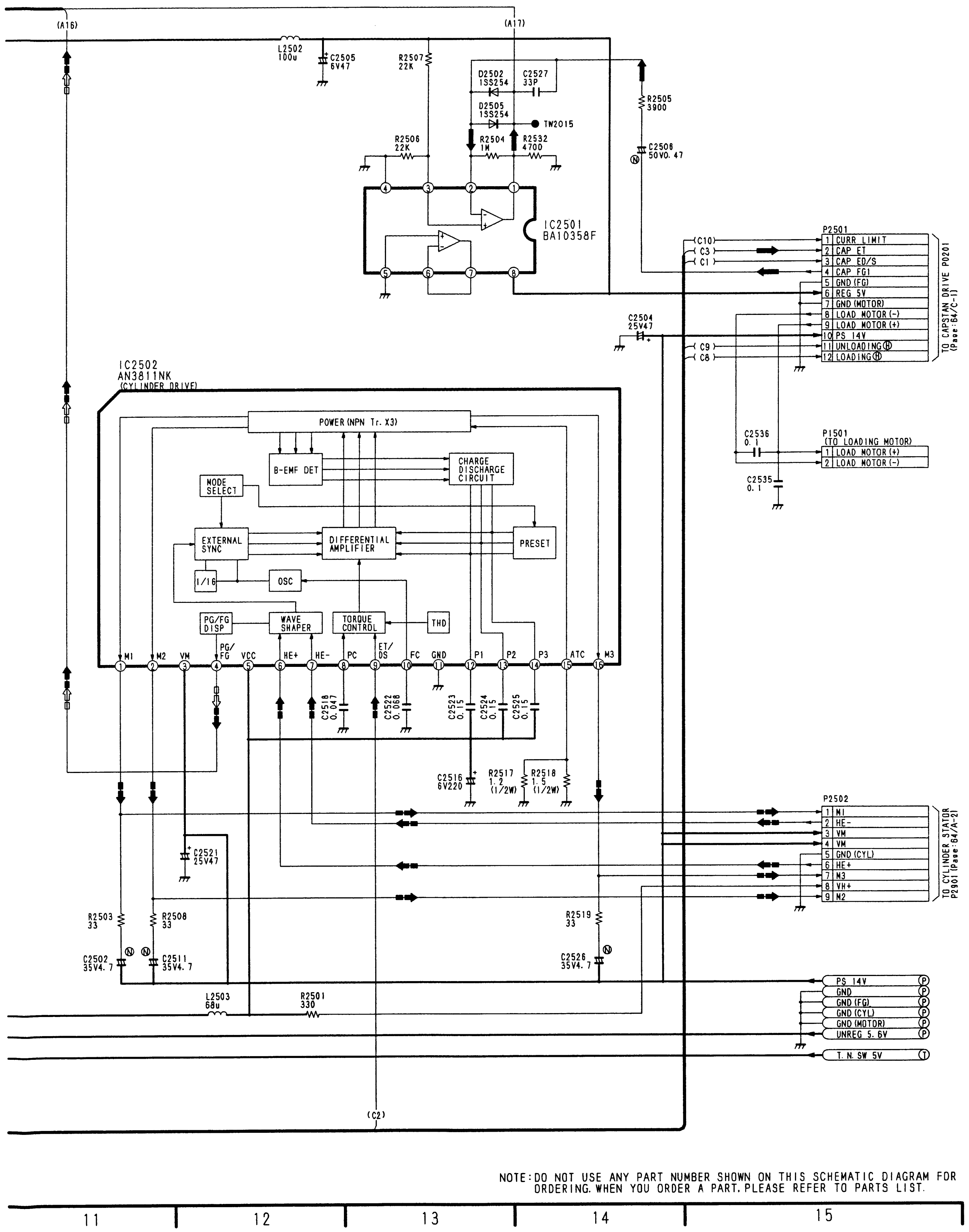

Ⓟ :TO POWER SUPPLY/RF SECTION(Page:54)
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION(Page:56)
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION(Page:58)
Ⓘ :TO INPUT/OUTPUT SECTION(Page:60)
DP7501
VSL0533
S-VHS ET CH SAT CVC VCR XP EP LP SP ON OFF REMAIN
REC
Ⓟ HEATER (+)
Ⓟ HEATER (-)
Ⓟ FIP -29V
Ⓟ GND
Ⓟ AN3
Ⓟ AN2
Ⓟ S SW
Ⓢ POWER SW
Ⓢ RESET
Ⓢ BACK UP 5V
Ⓟ N. SW 5V
ⓈⓋ P. FAIL
Ⓢ OSD/FIP CS
Ⓢ SYS BUS TLK
Ⓢ SYS BUS LSN
Ⓢ SYS BUS CLK
Ⓢ IR
Ⓢ T. N. SW 5V
IC7501
M35500AFP
IC7503
RN5VD28AA
(RESET)
IC7504
PNA4611M02VT
(IR RECEIVER)
IC7502
S80743AL
(RESET)
A. DUB
S7517
EVQ11L07B
REC/OTR
S7503
PAUSE
S7507
EJECT
S7516
CH DOWN
S7504
CH UP
S7506
DIRECT TV REC
S7509
POWER
S7510
EVQ11L07B
Q7501
2SB709A
(INV.)
Q7502
2SD973
(SAT LED DRIVE)
TH7501
VRT0162M220
UNREG 14V
GND (A)
REG 5V
SAT IR
FRONT VIDEO
FRONT AUDIO
P7502
1 FRONT AUDIO P6501-6
2 GND (A) P6501-5
3 FRONT VIDEO P6501-4
4 P6501-3
5 UNREG 14V P6501-2
6 SAT IR P6501-1
TO AV FRONT P6501 (Page:64/B-1)
(C/D/E)
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10

NOTE:THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.4. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM


Ⓟ :TO POWER SUPPLY/RF SECTION (Page 54)
Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION (Page 58)
Ⓘ :TO INPUT/OUTPUT SECTION (Page 60)
Ⓗ :TO HEAD AMP SECTION (Page 61)
Ⓣ :TO TIMER SECTION (Page 55)
CAPSTAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
Ⓟ REG 5V
Ⓟ PS 5V
Ⓟ AUDIO DEF Ⓗ
Ⓟ AFC S-CURVE
Ⓥ CTL HEAD (+)
Ⓥ CTL HEAD (-)
Ⓥ C SYNC
Ⓥ SHORT DET Ⓛ
ⓅⓋ SYS IIC DATA
ⓅⓋ SYS IIC CLOCK
Ⓗ TRACKING ENV.
Ⓥ FREQ. ADJ.
Ⓥ ART V/H/N
Ⓘ IR
Ⓗ ROTARY SW
Ⓗ ENV. SELECT
Ⓗ CURR. EMPH Ⓗ
Ⓥ BIAS Ⓗ
Ⓗ H. AMP SW
Ⓥ MUTE Ⓗ
Ⓥ FULL ERASE Ⓗ
Ⓟ FIP Ⓛ
ⓋⓉ OSD/FIP CS
Ⓗ HEAD SW
Ⓣ POWER SW
Ⓗ D. REC Ⓗ
Ⓣ RESET Ⓛ
Ⓣ P FAIL Ⓛ
ⓋⓉ SYS BUS CLK
ⓋⓉ SYS BUS LSN
ⓋⓉ SYS BUS TLK
Ⓥ YMO Ⓗ
Ⓥ D. A. REC Ⓗ
Ⓟ POWER OFF Ⓗ
Ⓟ SLEEP Ⓛ
ⓅⒾ SLEEP Ⓗ
Ⓗ LP Ⓗ
MODE SW
S1501 VSS0520
Ⓟ N. SW 5V
Ⓣ BACK UP 5V
D6004 RB441P
D6003 0:A/B MA700 C/D/E
C6011 6V47
R1504 120
C1501 220P
R6038 43K
Q1502 PNB2301MAV (S-PHOTO)
D1501 SIR505S SENSOR
Q1501 PNB2301MBV (T-PHOTO)
R6036 100
R6039 39K
C6022 0.01
TL6010
R6005 10K
R1506 27K
R1505 39K
R6031 27K
(A/B) R6011 10K
R2513 270K
C6026 0.1
R6007 10K
C6013 16V10
R6006 1K
C6012 1000P
TW2001
R6003 1K
C6018 1000P
L6001 220u
C6021 0.022
QR6004 MUN2212 (D. A. REC Ⓗ:ON)
R6035 1K
C6024 0.1
D6001 MA700
(C/D/E)
IC6001 M37777VFFE
TW2002
C2520 3900P
C2514 16V10
C2517 6V47
C2501 680P
R2502 6800
(A/B)
(C/D/E)
D2504 1SS254
C2513 25V4.7
C2512 6V220
C6001 1
R6083 5600
C2519 0.1
C6007 150P
C6023 100P
C6025 100P
IC1502 RP1354N (S-REEL)
IC1501 RP1354N (T-REEL)
R1501 27K
R1503 27K
R1502 180
TL6012
TL6013
R2515 10K
R2514 1K
R2516 10K
C2509 0.056
C2508 0.056
R2510 1K
C2510 0.056
C2507 0.056
R6012 4700
R6013 4700
R6009 2700
R6008 2700
R6001 4700
R6002 18K
C7618 0.1
TW6002
TL2502
R6022 1K
C6019 0:A/B 0.01 C/D/E
QR6002 MUN2211 (SLEEP Ⓛ:OFF)
TL2503
SAFETY TAB
S6001 VES0834
R6010 22K
R2511 43K
R6037 100
C6020 0.1
R6021 1M
R6020 1K
X6001 VSX0830
R6019 10M
R6018 220K
X6002 VSX0660
C6004 12P
C6003 20P
C6005 18P
C6002 18P
A. DEF Ⓗ
AFC S
H/N/V/L
N/S/T1/T2
S-PHOTO
T-PHOTO
TRACKING ENV.
CURRENT LIMIT
F. ADJ.
ART V/H/N
IR
ROTARY SW
H. AMP SW
ENV. SELECT
VIDEO H. SW
AUDIO H. SW
D. REC Ⓗ
CURR EMPH Ⓗ
V. EE Ⓛ
D. A. REC Ⓗ
BIAS Ⓗ
FM MUTE Ⓗ
V. SYNC Ⓛ
F ERASE Ⓗ
POSI. SW3
POSI. SW2
POSI. SW1
GND
GND
16M START Ⓗ
+5V (D)
18MHz IN
18MHz OUT
GND (OSC)
32MHz IN
32MHz OUT
RESET Ⓛ
FIP Ⓛ
OSD/FIP CS
CAL Ⓗ
POWER SW
S TAB Ⓛ
HI SPEED Ⓗ
P. OFF Ⓗ
FF/REW Ⓛ
UNLOADING Ⓗ
LOADING Ⓗ
LP Ⓗ
SLEEP Ⓛ
SYSTEM 4
SYSTEM 2
SYSTEM 5
YMO Ⓗ
EDIT TRIG Ⓛ
PRE ROLL Ⓗ
SP DATA OUT
SP DATA IN
SP CLOCK
T TLK
T LSN
T CLK
IIC C
IIC D
125Hz
P FAIL Ⓛ
CAP R/F
CAP ET
CYL ET
S-REEL PULSE
T-REEL PULSE
SHORT D Ⓛ
C SYNC
CAP FG IN
CYL PFG
SECAM24 Ⓗ
GND
OREF
IREF
CTL HEAD (-)
CTL HEAD (+)
CTL AMP SW
CTL AMP IN
CTL AMP REF
CTL AMP GND
PB CTL OUT
+5V (A)
+5V (AD)
(A1)
(A7)
(A8)
(A16)(A17)(A9)(A10)
(A13)(A14)
(B1)
(B2)
(B3)
(B4)
(B5)
(B6)
(B10)
(B11)
(B13)
(B19)
(B21)
(B22)
(B23)
(B24)
(B30)
(B37)(B38)(B36)
(B14)(B15)
(B17)
(B18)
(B32)
(B33)(B34)
(C1)
(C2)
(C3)
(C8)
(C9)
(C10)


(A16)
(A17)
L2502
100u
C2505
6V47
R2507
22K
D2502
1SS254
C2527
33P
D2505
1SS254
TW2015
R2506
22K
R2504
1M
R2532
4700
R2505
3900
C2506
50V0.47
IC2501
BA10358F
P2501
CURR LIMIT
CAP ET
CAP ED/S
CAP FG1
GND (FG)
REG 5V
GND (MOTOR)
LOAD MOTOR (-)
LOAD MOTOR (+)
PS 14V
UNLOADING
LOADING
TO CAPSTAN DRIVE P0201 (Page 64/C-1)
(C10)
(C3)
(C1)
(C9)
(C8)
C2504
25V47
C2536
0.1
C2535
0.1
P1501
(TO LOADING MOTOR)
LOAD MOTOR (+)
LOAD MOTOR (-)
IC2502
AN3811NK
(CYLINDER DRIVE)
POWER (NPN Tr. X3)
B-EMF DET
CHARGE DISCHARGE CIRCUIT
MODE SELECT
EXTERNAL SYNC
DIFFERENTIAL AMPLIFIER
PRESET
1/16
OSC
PG/FG DISP
WAVE SHAPER
TORQUE CONTROL
THD
M1
M2
VM
PG/FG
VCC
HE+
HE-
PC
ET/DS
FC
GND
P1
P2
P3
ATC
M3
C2518
0.047
C2522
0.068
C2523
0.15
C2524
0.15
C2525
0.15
C2516
6V220
R2517
1.2 (1/2W)
R2518
1.5 (1/2W)
P2502
M1
HE-
VM
VM
GND (CYL)
HE+
M3
VH+
M2
TO CYLINDER STATOR P2901 (Page 64/A-2)
C2521
25V47
R2503
33
R2508
33
R2519
33
C2502
35V4.7
C2511
35V4.7
C2526
35V4.7
L2503
68u
R2501
330
PS 14V
GND
GND (FG)
GND (CYL)
GND (MOTOR)
UNREG 5.6V
T.N.SW 5V
(C2)
11
12
13
14
15

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

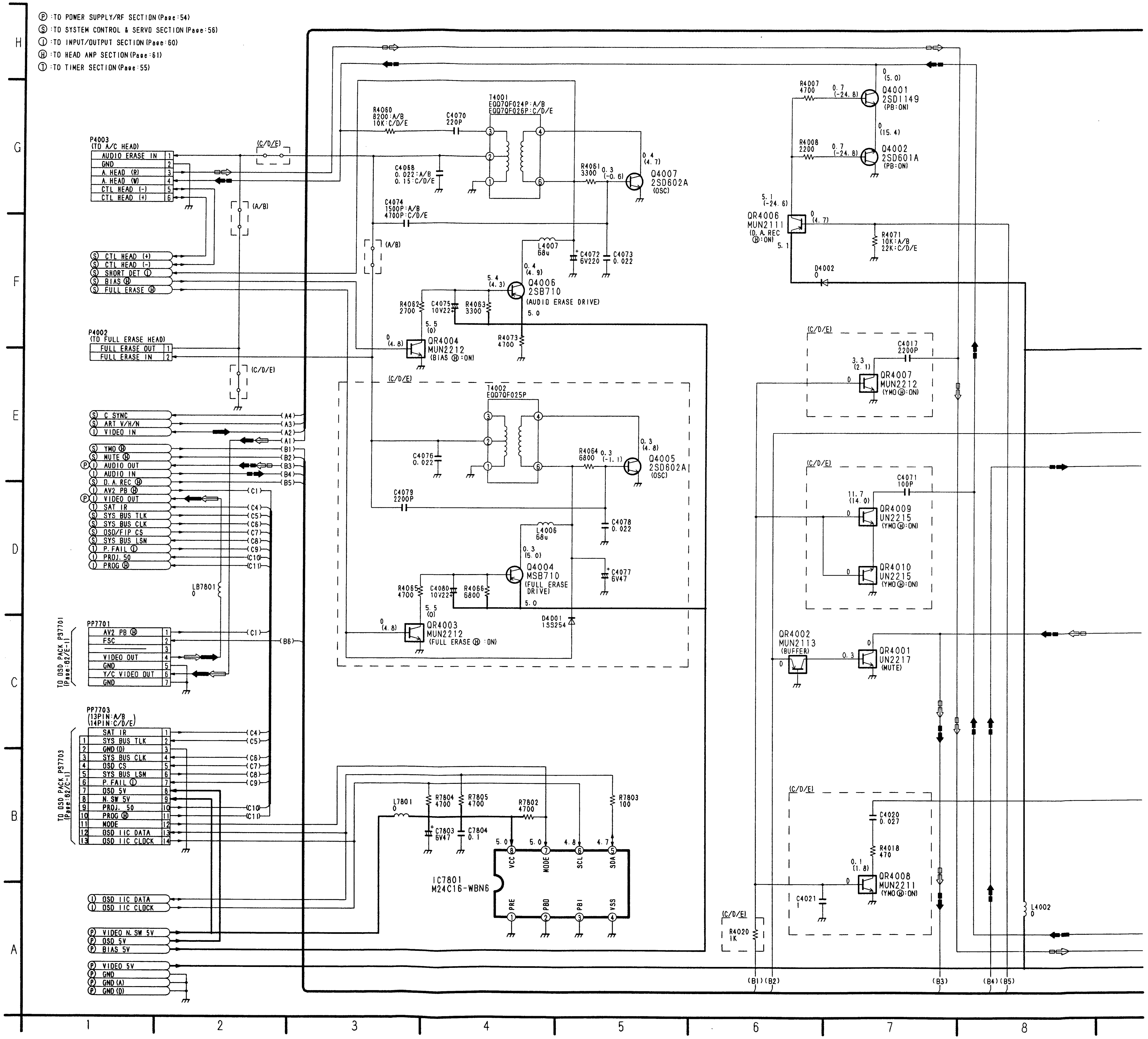
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

Ref. No.	IC1501								IC1502											
MODE	1	2	3	4					1	2	3	4								
STOP	1.1	2.3	5.1	0					0	1.1	5.1	0								
PLAY	1.1	2.3	4.9	0					0	1.1	5.0	0								
REC	1.1	2.3	4.1	0					0	1.1	5.1	0								
F.F	1.1	2.3	2.4	0					0	1.1	2.3	0								
REW	1.1	2.3	2.4	0					0	1.1	2.4	0								
Ref. No.	IC2501																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.5	2.5	0	0	0	0	5.0												
PLAY	2.5	2.5	2.5	0	0	0	0	5.0												
REC	2.5	2.5	2.5	0	0	0	0	5.0												
F.F	2.5	2.5	2.5	0	0	0	0	5.1												
REW	2.5	2.5	2.5	0	0	0	0	5.1												
Ref. No.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
STOP	14.5	14.5	14.7	1.1	5.0	1.1	1.1	0.5	2.4	1.4	0	3.8	3.8	3.8	0	14.5				
PLAY	14.4	14.4	14.7	1.1	5.0	1.1	1.1	0.5	2.4	1.4	0	3.8	3.8	3.8	0	14.4				
REC	14.4	14.4	14.7	1.1	5.0	1.1	1.1	0.5	2.4	1.4	0	3.8	3.8	3.8	0	14.4				
F.F	14.2	14.2	14.4	1.1	5.1	1.1	1.1	0.5	2.5	1.4	0	3.9	3.8	3.8	0	14.2				
REW	14.1	14.1	14.4	1.1	5.1	1.1	1.1	0.6	2.5	1.4	0	3.9	3.8	3.8	0	14.2				
Ref. No.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	4.1	0	2.8	0	3.7	5.1	5.1	4.6	1.7	0	0	1.9	0	5.1	0	0	0	0	0	0
PLAY	4.4	0	2.8	0	3.7	5.1	5.1	4.5	3.5	0	4.8	1.9	0	5.1	2.4	0	4.9	2.4	2.4	0
REC	4.4	0	2.8	0	3.7	5.1	5.1	4.5	2.2	0	4.8	1.9	0	5.0	2.4	0	4.7	2.4	0	0
F.F	4.3	0	2.7	0	3.6	5.0	4.9	3.7	0.8	0	4.9	1.9	0	5.0	0	0	2.7	2.3	0	0
REW	4.3	0	2.6	0	3.6	5.0	4.9	3.8	2.7	0	5.0	1.9	0	5.0	0	0	0.0	2.3	0	0
Ref. No.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	1.3	0	0	0	0	0	0	0	4.8	4.8	0	0	4.7	4.7	2.2	2.2	0
PLAY	0	0	4.8	4.8	0	1.3	0	0	0	0	4.8	0	0	0	0	4.8	4.8	2.1	2.0	0
REC	4.8	0	4.8	0	0	4.7	4.8	0	0	4.8	4.8	0	0	0	0	4.8	4.8	2.0	2.0	0
F.F	0	0	0	0	0	0	0	0	0	0	4.7	4.7	0	0	0	4.7	4.7	-	-	0
REW	0	0	0	0	0	0	0	0	0	0	4.7	4.7	0	0	0	4.7	4.7	-	-	0
Ref. No.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	1.2	1.3	4.7	0	0	0	5.1	0	0	0	0	0	0	0	0	0	0	4.7	0	4.8
PLAY	0.9	1.3	4.8	0	2.4	0	5.1	0	0	0.1	0	0	0	0	0	0	0	4.8	0	4.8
REC	1.1	1.3	4.8	4.8	0.6	0	5.1	0	0	0.4	0	0	0	0	0	0	0	4.7	0	4.8
F.F	1.1	1.3	4.7	0	2.4	0	5.1	0	0	4.6	0	2.1	0	0	0	0	0	4.7	0	4.8
REW	1.1	1.3	4.7	0	2.4	0	5.1	0	0	4.6	0	2.1	0	0	0	0	0	4.7	0	4.8
Ref. No.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	0	5.1	0	5.0	5.0	5.0	4.4	4.1	4.5	3.1	3.0	0	0	5.0	0	0	2.5	5.1	5.1
PLAY	0	0	5.1	0	5.1	5.1	5.1	4.5	4.0	4.5	0	0	0	0	5.1	0	2.4	2.4	5.0	4.9
REC	0	0	5.1	0	5.1	5.1	5.1	4.5	4.0	0.4	3.2	3.1	0	0	5.1	0	2.4	2.4	5.1	4.1
F.F	0	0	5.1	0	5.0	5.0	5.0	4.5	4.1	4.4	3.1	3.0	0	0	5.0	0	4.7	2.5	2.3	2.4
REW	0	0	5.1	0	5.0	5.0	5.0	4.5	4.1	4.4	3.1	3.0	0	0	5.0	4.7	3.0	2.4	2.4	2.4
Ref. No.	IC6001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	0	0	0.3	0.4	2.5	1.1	5.0	0	2.5	2.5	0	0	0	2.5	2.5	0	2.4	5.0	5.0	0
PLAY	0	0	0.3	0.4	2.5	1.1	5.0	0	2.5	2.5	0	0	0	2.4	2.5	0	2.5	5.1	5.0	0
REC	0	0	4.7	0.8	3.9	1.0	5.0	0	2.5	2.5	2.3	2.7	0	2.5	2.5	0	2.5	5.1	5.0	0
F.F	0	0	0.3	0.4	2.5	1.1	5.0	0	2.5	2.5	0	0	0	2.5	2.5	0	2.4	5.0	5.0	0
REW	0	0	0.3	0.4	2.5	1.1	5.0	0	2.5	2.5	0	0	0	2.5	2.5	0	2.4	5.0	5.0	0

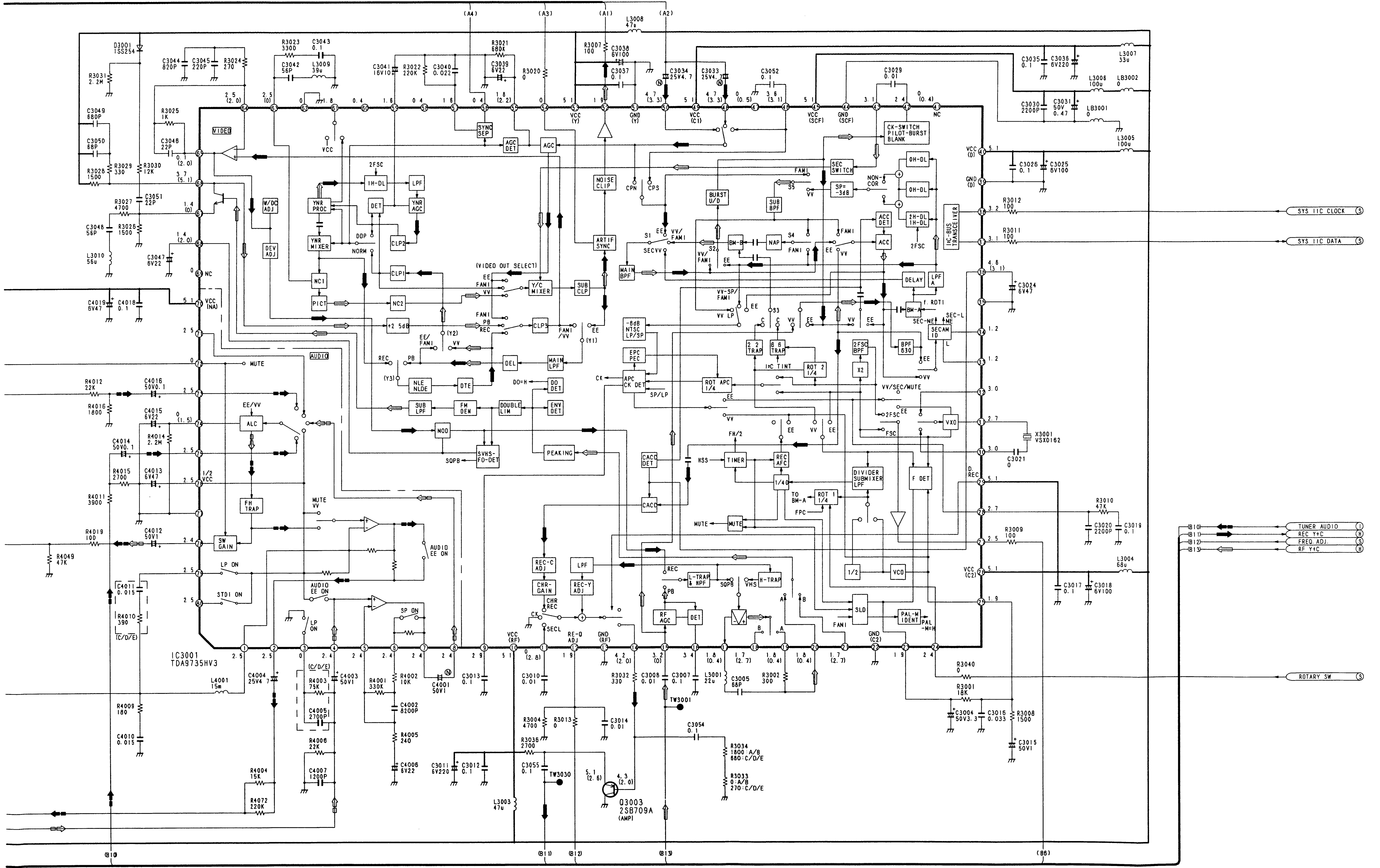
SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (SP MODE)

Ref. No.	Q1501				Q1502															
MODE	+	−			+	−														
STOP	4.5	0			4.9	0														
PLAY	4.5	0			4.9	0														
REC	4.5	0			4.9	0														
F.F	4.3	0			4.8	0														
REW	4.3	0			4.8	0														
Ref. No.	QR6002				QR6004															
MODE	E	C	B		E	C	B													
STOP	-0.1	0	4.8		0	0	0													
PLAY	0	0	4.8		0	0	0													
REC	0	0	4.7		0	0	4.7													
F.F	0.1	0	4.7		0	0	0													
REW	0	0	4.7		0	0	0													

9.5. LUMINANCE & CHROMINANCE/AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM


Ⓟ :TO POWER SUPPLY/RF SECTION (Page:54)
Ⓢ :TO SYSTEM CONTROL & SERVO SECTION (Page:56)
Ⓘ :TO INPUT/OUTPUT SECTION (Page:60)
Ⓗ :TO HEAD AMP SECTION (Page:61)
Ⓣ :TO TIMER SECTION (Page:55)
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
P4003
(TO A/C HEAD)
AUDIO ERASE IN 1
GND 2
A. HEAD (R) 3
A. HEAD (W) 4
CTL HEAD (-) 5
CTL HEAD (+) 6
(C/D/E)
(A/B)
Ⓢ CTL HEAD (+)
Ⓢ CTL HEAD (-)
Ⓢ SHORT DET Ⓘ
Ⓢ BIAS Ⓗ
Ⓢ FULL ERASE Ⓗ
P4002
(TO FULL ERASE HEAD)
FULL ERASE OUT 1
FULL ERASE IN 2
(C/D/E)
Ⓢ C SYNC
Ⓢ ART V/H/N
Ⓘ VIDEO IN
Ⓢ YMO Ⓗ
Ⓢ MUTE Ⓗ
ⓅⒾ AUDIO OUT
Ⓘ AUDIO IN
Ⓢ D. A. REC Ⓗ
Ⓘ AV2 PB Ⓗ
ⓅⒾ VIDEO OUT
Ⓣ SAT IR
Ⓢ SYS BUS TLK
Ⓢ SYS BUS CLK
Ⓢ OSD/FIP CS
Ⓢ SYS BUS LSN
Ⓣ P. FAIL Ⓘ
Ⓘ PROJ. 50
Ⓘ PROG Ⓗ
(A4) (A3) (A2) (A1)
(B1) (B2) (B3) (B4) (B5)
(C1) (C4) (C5) (C6) (C7) (C8) (C9) (C10) (C11)
LB7801
0
TO OSD PACK PS7701 (Page:62/E-1)
PP7701
AV2 PB Ⓗ 1
FSC 2
3
VIDEO OUT 4
GND 5
Y/C VIDEO OUT 6
GND 7
(B6)
TO OSD PACK PS7703 (Page:62/C-1)
PP7703
(13PIN:A/B
14PIN:C/D/E)
SAT IR 1
1 SYS BUS TLK 2
2 GND (D) 3
3 SYS BUS CLK 4
4 OSD CS 5
5 SYS BUS LSN 6
6 P. FAIL Ⓘ 7
7 OSD 5V 8
8 N. SW 5V 9
9 PROJ. 50 10
10 PROG Ⓗ 11
11 MODE 12
12 OSD IIC DATA 13
13 OSD IIC CLOCK 14
Ⓘ OSD IIC DATA
Ⓘ OSD IIC CLOCK
Ⓟ VIDEO N. SW 5V
Ⓟ OSD 5V
Ⓟ BIAS 5V
Ⓟ VIDEO 5V
Ⓟ GND
Ⓟ GND (A)
Ⓟ GND (D)
T4001
EQQ7QF024P:A/B
EQQ7QF026P:C/D/E
R4060
8200:A/B
10K:C/D/E
C4070
220P
C4068
0. 022:A/B
0. 15:C/D/E
C4074
1500P:A/B
4700P:C/D/E
R4061
3300
0. 3
(-0. 6)
0. 4
(4. 7)
Q4007
2SD602A
(OSC)
L4007
68u
C4072
6V220
C4073
0. 022
0. 4
(4. 9)
5. 4
(4. 3)
Q4006
2SB710
(AUDIO ERASE DRIVE)
5. 0
R4062
2700
C4075
10V22
R4063
3300
5. 5
(0)
0
(4. 8)
QR4004
MUN2212
(BIAS Ⓗ:ON)
R4073
4700
(C/D/E)
T4002
EQQ7QF025P
C4076
0. 022
R4064
6800
0. 3
(-1. 1)
0. 3
(4. 8)
Q4005
2SD602A
(OSC)
C4079
2200P
C4078
0. 022
L4006
68u
0. 3
(5. 0)
Q4004
MSB710
(FULL ERASE DRIVE)
C4077
6V47
R4065
4700
C4080
10V22
R4066
6800
5. 0
5. 5
(0)
0
(4. 8)
QR4003
MUN2212
(FULL ERASE Ⓗ :ON)
D4001
1SS254
R4007
4700
0. 7
(-24. 8)
0
(5. 0)
Q4001
2SD1149
(PB:ON)
0
(15. 4)
R4008
2200
0. 7
(-24. 8)
Q4002
2SD601A
(PB:ON)
5. 1
(-24. 6)
QR4006
MUN2111
(D. A. REC
Ⓗ:ON)
5. 1
0
(4. 7)
R4071
10K:A/B
22K:C/D/E
D4002
0
(C/D/E)
C4017
2200P
3. 3
(2. 1)
0
QR4007
MUN2212
(YMO Ⓗ:ON)
(C/D/E)
C4071
100P
11. 7
(14. 0)
0
QR4009
UN2215
(YMO Ⓗ:ON)
0
QR4010
UN2215
(YMO Ⓗ:ON)
QR4002
MUN2113
(BUFFER)
0
0. 3
0
QR4001
UN2217
(MUTE)
L7801
0
R7804
4700
R7805
4700
R7802
4700
R7803
100
C7803
6V47
C7804
0. 1
5. 0
5. 0
4. 8
4. 7
8 VCC
7 MODE
6 SCL
5 SDA
IC7801
M24C16-WBN6
1 PRE
2 PBD
3 PBI
4 VSS
(C/D/E)
C4020
0. 027
R4018
470
0. 1
(1. 8)
0
QR4008
MUN2211
(YMO Ⓗ:ON)
C4021
1
(C/D/E)
R4020
1K
L4002
0
(B1) (B2)
(B3)
(B4) (B5)

◀ VIDEO MAIN SIGNAL PATH IN REC MODE ⇦ VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE ◀■ AUDIO MAIN SIGNAL PATH IN REC MODE ⇦□ AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


IC3001
TDA9735HV3
Q3003
2SB709A
(AMP)
D3001
1SS254
X3001
VSX0162
VIDEO
AUDIO
YNR PROC
YNR MIXER
YNR AGC
1H-DL
LPF
DET
CLP1
CLP2
CLP3
NC1
NC2
PICT
+2.5dB
SYNC SEP
AGC DET
AGC
NOISE CLIP
ARTIF SYNC
Y/C MIXER
SUB CLP
MAIN LPF
DEL
NLE NLDE
DTE
DO DET
SUB LPF
FM DEM
DOUBLE LIM
ENV DET
MOD
SVHS-FO-DET
PEAKING
W/DC ADJ
DEV ADJ
ALC
FH TRAP
SW GAIN
MUTE
EE/VV
LP ON
STD1 ON
AUDIO EE ON
SP ON
CK-SWITCH PILOT-BURST BLANK
SEC SWITCH
SP=-3dB
BURST U/D
SUB BPF
MAIN BPF
BM-B
NAP
ACC DET
ACC
0H-DL
2H-DL 1H-DL
I²C-BUS TRANSCEIVER
DELAY
LPF A
BM-A
SECAM ID
BPF 630
2FSC BPF
X2
2.2 TRAP
6.6 TRAP
ROT 2 1/4
-8dB NTSC LP/SP
EPC PEC
APC CK DET
ROT APC 1/4
VXO
CACC DET
CACC
TIMER
REC AFC
1/4
ROT 1 1/4
DIVIDER SUBMIXER LPF
F DET
1/2
VCO
SLD
PAL-M IDENT
REC-C ADJ
CHR-GAIN
LPF
REC-Y ADJ
L-TRAP & HPF
H-TRAP
RF AGC
DET
SYS IIC CLOCK
SYS IIC DATA
TUNER AUDIO
REC Y+C
FREQ. ADJ.
RF Y+C
ROTARY SW
(A1)
(A2)
(A3)
(A4)
(B6)
B10
B11
B12
B13

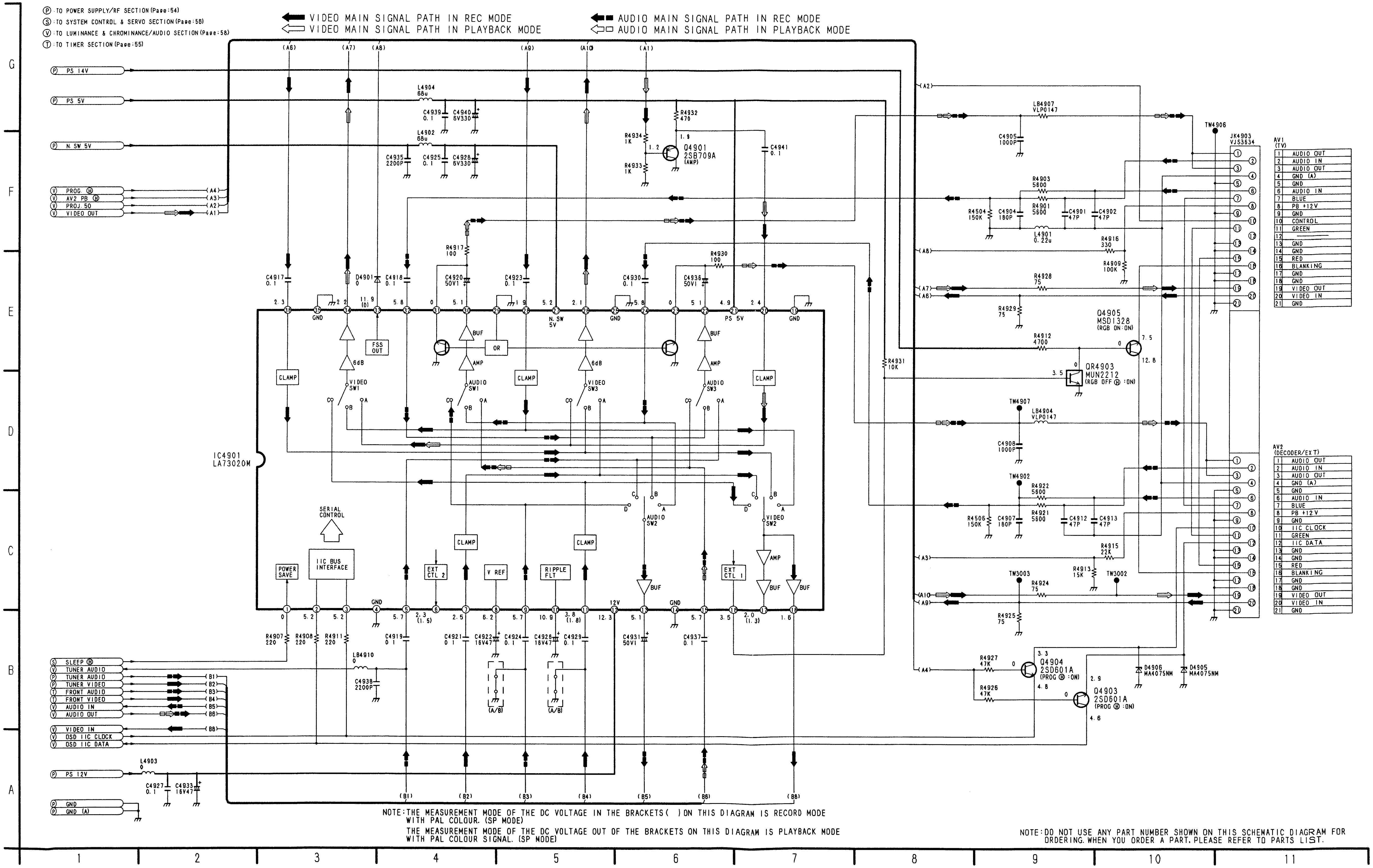
NOTE:THE MEASUREMENT MODE OF THE DC VLOLTAGE IN THE BRACKETS( )ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE:DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9 10 11 12 13 14 15 16 17 18 19 20

9.6. INPUT/OUTPUT SECTION IN MAIN SCHEMATIC DIAGRAM


Ⓟ -TO POWER SUPPLY/RF SECTION (Page:54)
Ⓢ -TO SYSTEM CONTROL & SERVO SECTION (Page:58)
Ⓥ -TO LUMINANCE & CHROMINANCE/AUDIO SECTION (Page:58)
Ⓣ -TO TIMER SECTION (Page:55)
VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE
PS 14V
PS 5V
N SW 5V
PROG Ⓗ
AV2 PB Ⓗ
PROJ 50
VIDEO OUT
SLEEP Ⓗ
TUNER AUDIO
TUNER AUDIO
TUNER VIDEO
FRONT AUDIO
FRONT VIDEO
AUDIO IN
AUDIO OUT
VIDEO IN
DSD IIC CLOCK
DSD IIC DATA
PS 12V
GND
GND (A)
IC4901
LA73020M
CLAMP
FSS OUT
BUF
OR
AMP
6dB
VIDEO SW1
AUDIO SW1
VIDEO SW3
AUDIO SW3
AUDIO SW2
VIDEO SW2
SERIAL CONTROL
IIC BUS INTERFACE
POWER SAVE
EXT CTL 2
EXT CTL 1
V REF
RIPPLE FLT
N. SW 5V
PS 5V
12V
GND
Q4901
2SB709A
(AMP)
Q4905
MSD1328
(RGB ON:ON)
QR4903
MUN2212
(RGB OFF Ⓗ :ON)
Q4904
2SD601A
(PROG Ⓗ :ON)
Q4903
2SD601A
(PROG Ⓗ :ON)
D4901
D4906
MA4075NM
D4905
MA4075NM
LB4907
VLP0147
LB4904
VLP0147
LB4910
L4901
0.22u
L4902
68u
L4903
L4904
68u
TW4906
TW4907
TW4902
TW3003
TW3002
JK4903
VJS3634
AV1
(TV)
1 AUDIO OUT
2 AUDIO IN
3 AUDIO OUT
4 GND (A)
5 GND
6 AUDIO IN
7 BLUE
8 PB +12V
9 GND
10 CONTROL
11 GREEN
12 —
13 GND
14 GND
15 RED
16 BLANKING
17 GND
18 GND
19 VIDEO OUT
20 VIDEO IN
21 GND
AV2
(DECODER/EXT)
1 AUDIO OUT
2 AUDIO IN
3 AUDIO OUT
4 GND (A)
5 GND
6 AUDIO IN
7 BLUE
8 PB +12V
9 GND
10 IIC CLOCK
11 GREEN
12 IIC DATA
13 GND
14 GND
15 RED
16 BLANKING
17 GND
18 GND
19 VIDEO OUT
20 VIDEO IN
21 GND
R4932 470
R4934 1K
R4933 1K
C4941 0.1
C4939 0.1
C4940 6V330
C4935 2200P
C4925 0.1
C4928 6V330
C4905 1000P
R4903 5600
R4901 5600
R4504 150K
C4904 180P
C4901 47P
C4902 47P
R4916 330
R4909 100K
R4928 75
R4929 75
R4912 4700
R4931 10K
R4930 100
R4917 100
C4917 0.1
C4918 0.1
C4920 50V1
C4923 0.1
C4930 0.1
C4936 50V1
C4908 1000P
R4922 5600
R4921 5600
R4506 150K
C4907 180P
C4912 47P
C4913 47P
R4915 22K
R4913 15K
R4924 75
R4925 75
R4927 47K
R4926 47K
R4907 220
R4908 220
R4911 220
C4919 0.1
C4938 2200P
C4921 0.1
C4922 16V47
C4924 0.1
C4926 16V47
C4929 0.1
C4931 50V1
C4937 0.1
C4927 0.1
C4933 16V47
(A/B)
(A1) (A2) (A3) (A4) (A6) (A7) (A8) (A9) (A10)
(B1) (B2) (B3) (B4) (B5) (B6) (B8)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.7. HEAD AMP SCHEMATIC DIAGRAM

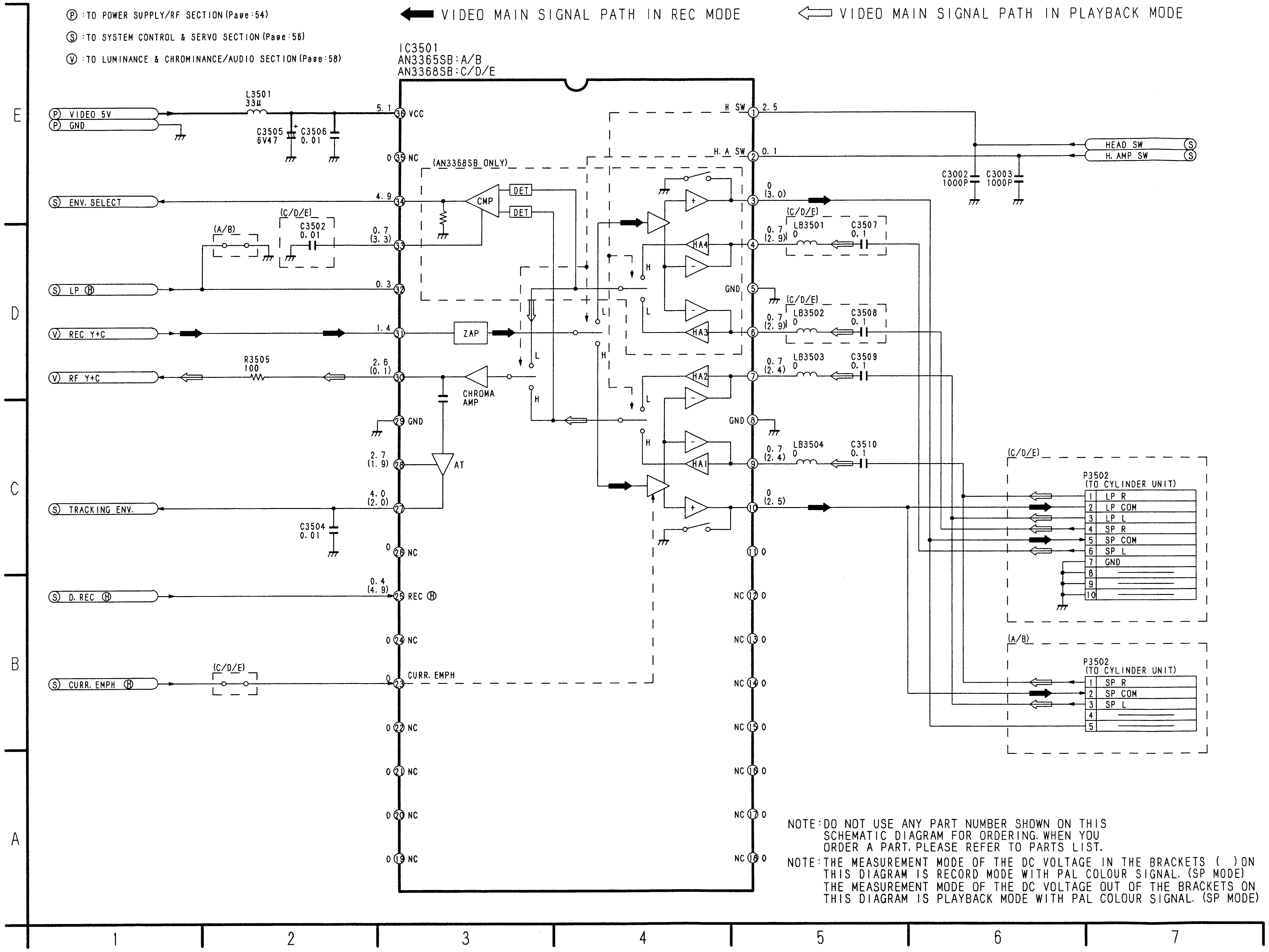
Ⓟ :TO POWER SUPPLY/RF SECTION(Page:54)

Ⓢ :TO SYSTEM CONTROL & SERVO SECTION(Page:56)

Ⓥ :TO LUMINANCE & CHROMINANCE/AUDIO SECTION(Page:58)

VIDEO MAIN SIGNAL PATH IN REC MODE

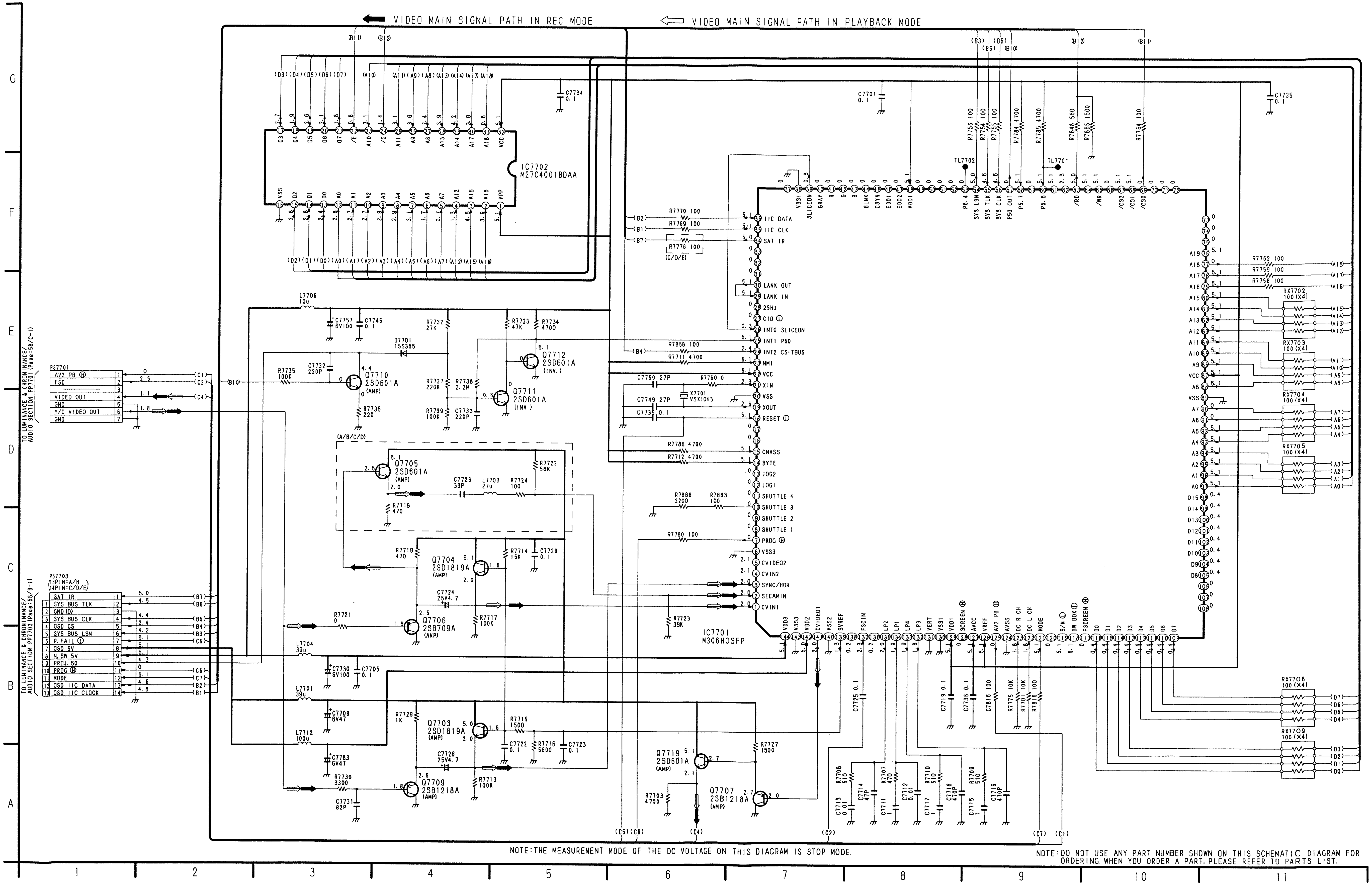
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE


IC3501
AN3365SB:A/B
AN3368SB:C/D/E
Ⓟ VIDEO 5V
Ⓟ GND
L3501 33µ
C3505 6V47
C3506 0.01
Ⓢ ENV. SELECT
(A/B)
(C/D/E)
C3502 0.01
Ⓢ LP Ⓗ
Ⓥ REC Y+C
Ⓥ RF Y+C
R3505 100
Ⓢ TRACKING ENV.
C3504 0.01
Ⓢ D. REC Ⓗ
Ⓢ CURR. EMPH Ⓗ
(AN3368SB ONLY)
VCC
NC
CMP
DET
DET
ZAP
CHROMA AMP
AT
GND
REC Ⓗ
CURR. EMPH
H SW
H. A SW
HA1
HA2
HA3
HA4
GND
LB3501
LB3502
LB3503
LB3504
C3507 0.1
C3508 0.1
C3509 0.1
C3510 0.1
C3002 1000P
C3003 1000P
HEAD SW Ⓢ
H. AMP SW Ⓢ
P3502 (TO CYLINDER UNIT)
1 LP R
2 LP COM
3 LP L
4 SP R
5 SP COM
6 SP L
7 GND
P3502 (TO CYLINDER UNIT)
1 SP R
2 SP COM
3 SP L
E
D
C
B
A
1
2
3
4
5
6
7

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

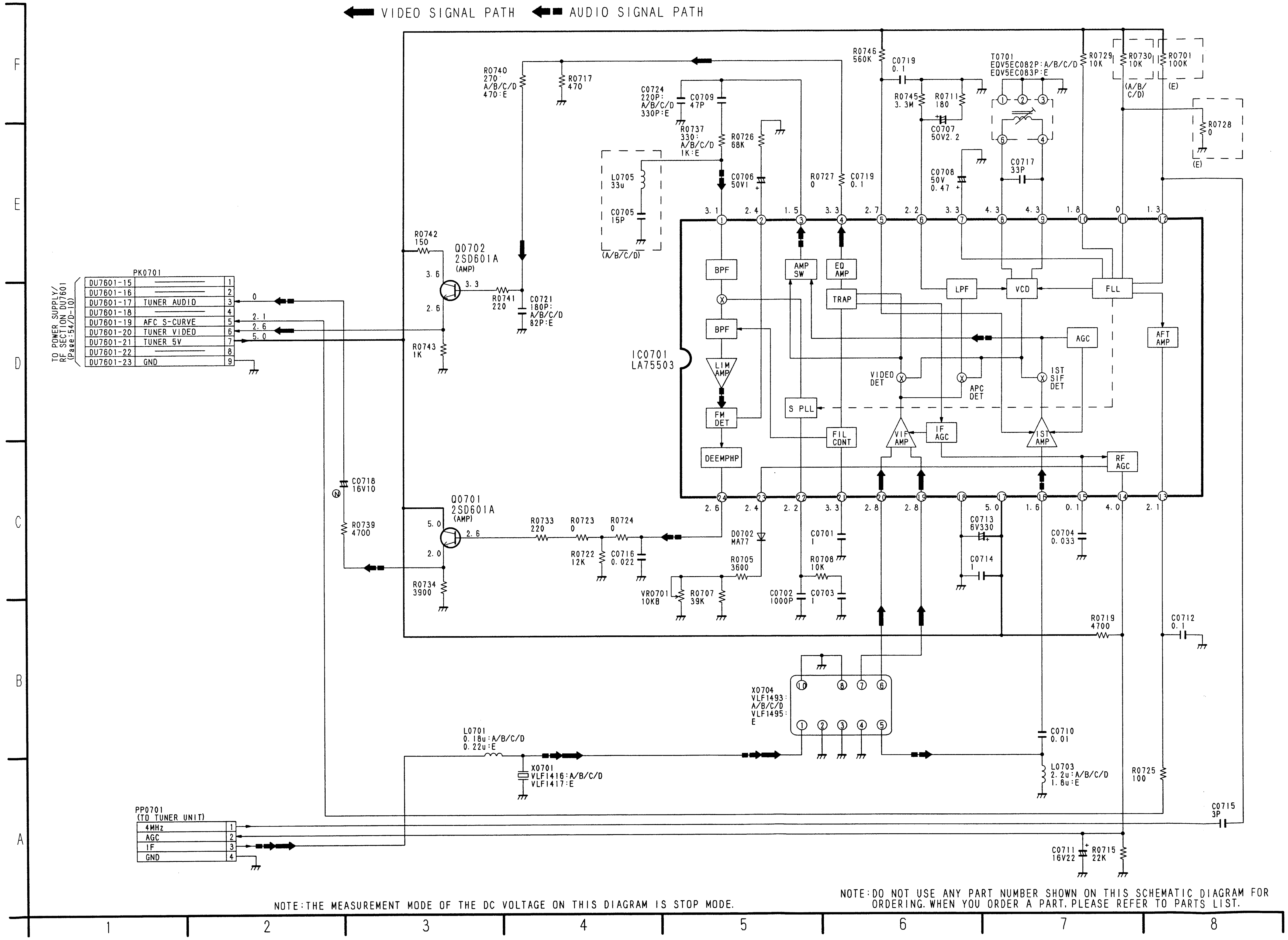
9.8. OSD PACK SCHEMATIC DIAGRAM


VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE
IC7702
M27C4001BDAA
IC7701
M306H0SFP
PS7701
AV2 PB Ⓗ
FSC
VIDEO OUT
GND
Y/C VIDEO OUT
GND
TO LUMINANCE & CHROMINANCE/AUDIO SECTION PP7701 (Page:58/C-1)
PS7703
(13PIN:A/B)
(14PIN:C/D/E)
SAT IR
SYS BUS TLK
GND (D)
SYS BUS CLK
OSD CS
SYS BUS LSN
P. FAIL Ⓛ
OSD 5V
N. SW 5V
PROJ. 50
PROG Ⓗ
MODE
OSD IIC DATA
OSD IIC CLOCK
TO LUMINANCE & CHROMINANCE/AUDIO SECTION PP7703 (Page:58/B-1)
Q7710 2SD601A (AMP)
Q7712 2SD601A (INV.)
Q7711 2SD601A (INV.)
Q7705 2SD601A (AMP)
Q7704 2SD1819A (AMP)
Q7706 2SB709A (AMP)
Q7703 2SD1819A (AMP)
Q7709 2SB1218A (AMP)
Q7719 2SD601A (AMP)
Q7707 2SB1218A (AMP)
D7701 1SS355
X7701 VSX1043
L7706 10u
L7704 39u
L7701 39u
L7712 100u
L7703 27u
RX7702 100 (X4)
RX7703 100 (X4)
RX7704 100 (X4)
RX7705 100 (X4)
RX7708 100 (X4)
RX7709 100 (X4)
TL7701
TL7702
IIC DATA
IIC CLK
SAT IR
LANK OUT
LANK IN
25Hz
CID Ⓛ
INT0 SLICEON
INT1 P50
INT2 CS-TBUS
NMI
VCC
XIN
VSS
XOUT
RESET Ⓛ
CNVSS
BYTE
JOG2
JOG1
SHUTTLE 4
SHUTTLE 3
SHUTTLE 2
SHUTTLE 1
PROG Ⓗ
VSS3
CVIDEO2
CVIN2
SYNC/HOR
SECAMIN
CVIN1
VDD3
VSS3
VDD2
CVIDEO1
VSS2
SVREF
FSCIN
LP2
LP1
LP4
LP3
VERT
VSS1
VDD1
SCREEN Ⓗ
AVCC
VREF
AV2 PB Ⓗ
AVSS
DC R CH
DC L CH
MODE
S/W Ⓛ
BM BOX Ⓛ
FSCREEN Ⓗ
SLICEON
GRAY
BLNK
CSYN
EDO1
EDO2
P6.4
SYS LSN
SYS TLK
SYS CLK
P50 OUT
P5.7
P5.5
/RD
/WR
/CS2
/CS1
/CS0
(A/B/C/D)
1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

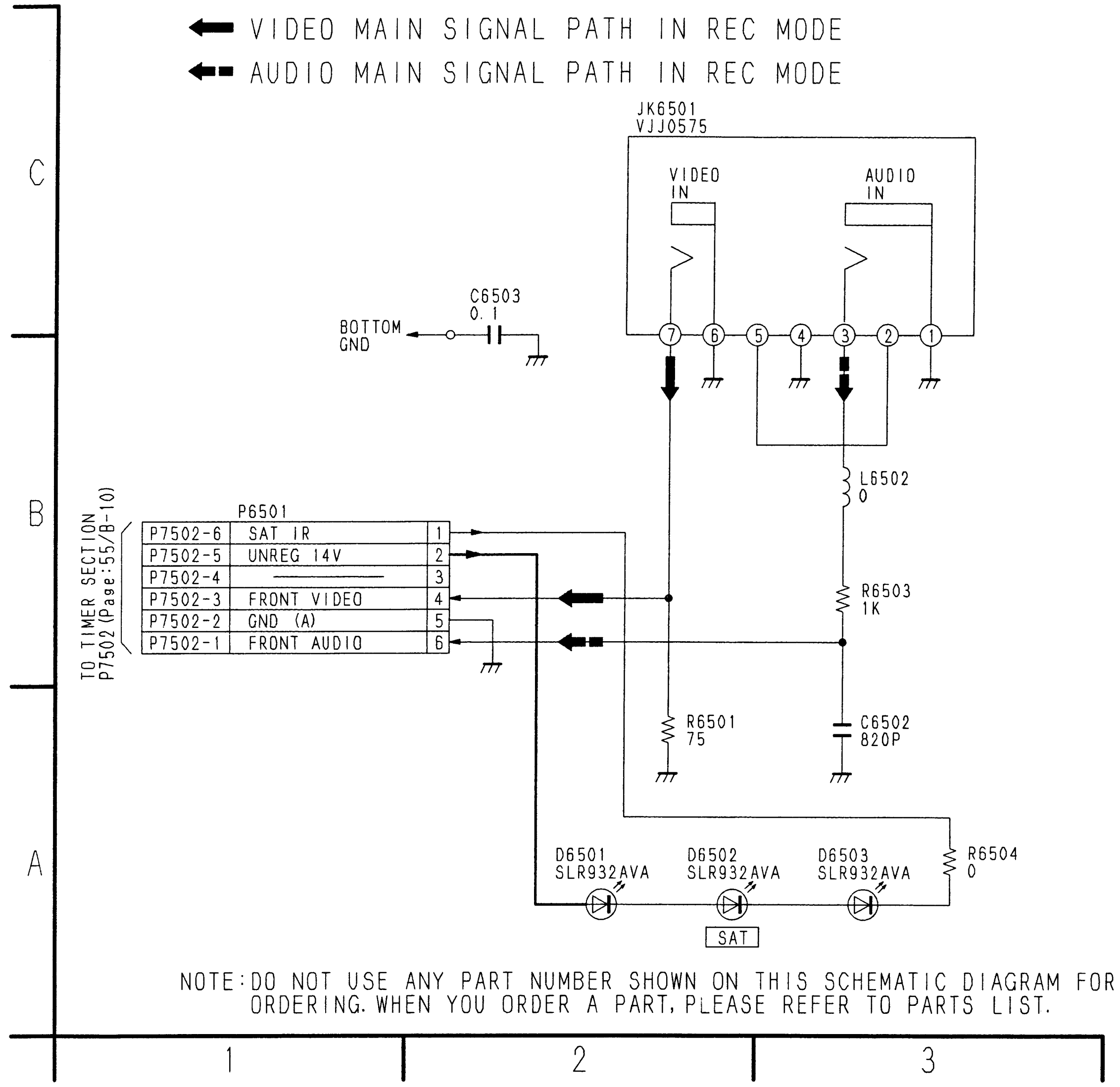
9.9. TV DEMODULATOR PACK SCHEMATIC DIAGRAM


VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
F
E
D
C
B
A
1
2
3
4
5
6
7
8
TO POWER SUPPLY/ RF SECTION DU7601 (Page:54/D-10)
PK0701
DU7601-15
DU7601-16
DU7601-17 TUNER AUDIO
DU7601-18
DU7601-19 AFC S-CURVE
DU7601-20 TUNER VIDEO
DU7601-21 TUNER 5V
DU7601-22
DU7601-23 GND
R0740 270: A/B/C/D 470:E
R0717 470
C0724 220P: A/B/C/D 330P:E
C0709 47P
R0737 330: A/B/C/D 1K:E
R0726 68K
L0705 33u
C0705 15P
(A/B/C/D)
C0706 50V1
R0746 560K
C0719 0.1
R0727 0
R0745 3.3M
R0711 180
C0707 50V2.2
C0708 50V 0.47
T0701 EQV5EC082P:A/B/C/D EQV5EC083P:E
C0717 33P
R0729 10K
R0730 10K
R0701 100K
(A/B/C/D)
(E)
R0728 0
R0742 150
Q0702 2SD601A (AMP)
R0741 220
C0721 180P: A/B/C/D 82P:E
R0743 1K
IC0701 LA75503
BPF
BPF
LIM AMP
FM DET
DEEMPHP
AMP SW
EQ AMP
TRAP
S PLL
FIL CONT
VIDEO DET
VIF AMP
IF AGC
LPF
VCO
APC DET
FLL
AGC
AFT AMP
1ST SIF DET
1ST AMP
RF AGC
C0718 16V10
R0739 4700
Q0701 2SD601A (AMP)
R0733 220
R0723 0
R0724 0
R0722 12K
C0716 0.022
R0734 3900
D0702 MA77
R0705 3600
VR0701 10KB
R0707 39K
C0701 1
R0708 10K
C0702 1000P
C0703 1
C0713 6V330
C0714 1
C0704 0.033
R0719 4700
C0712 0.1
X0704 VLF1493: A/B/C/D VLF1495: E
L0701 0.18u:A/B/C/D 0.22u:E
X0701 VLF1416:A/B/C/D VLF1417:E
C0710 0.01
L0703 2.2u:A/B/C/D 1.8u:E
R0725 100
C0715 3P
C0711 16V22
R0715 22K
PP0701 (TO TUNER UNIT)
4MHz
AGC
IF
GND

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

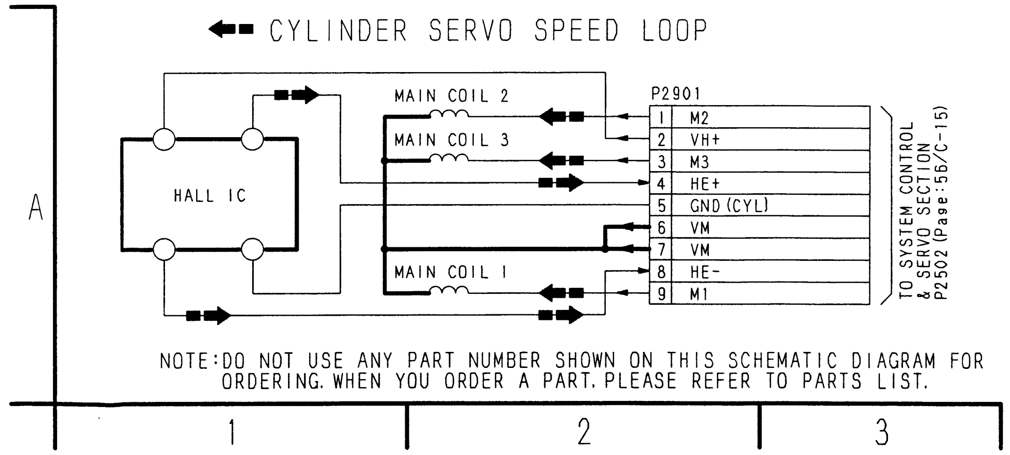
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.10. AV FRONT SCHEMATIC DIAGRAM (NV-SJ410EG/EGM/EGY/B)


VIDEO MAIN SIGNAL PATH IN REC MODE
AUDIO MAIN SIGNAL PATH IN REC MODE
JK6501
VJJ0575
VIDEO IN
AUDIO IN
C6503
0.1
BOTTOM GND
L6502
0
R6503
1K
P6501
P7502-6 SAT IR 1
P7502-5 UNREG 14V 2
P7502-4 3
P7502-3 FRONT VIDEO 4
P7502-2 GND (A) 5
P7502-1 FRONT AUDIO 6
TO TIMER SECTION P7502 (Page:55/B-10)
R6501
75
C6502
820P
D6501 SLR932AVA
D6502 SLR932AVA
D6503 SLR932AVA
R6504
0
SAT
C
B
A
1
2
3

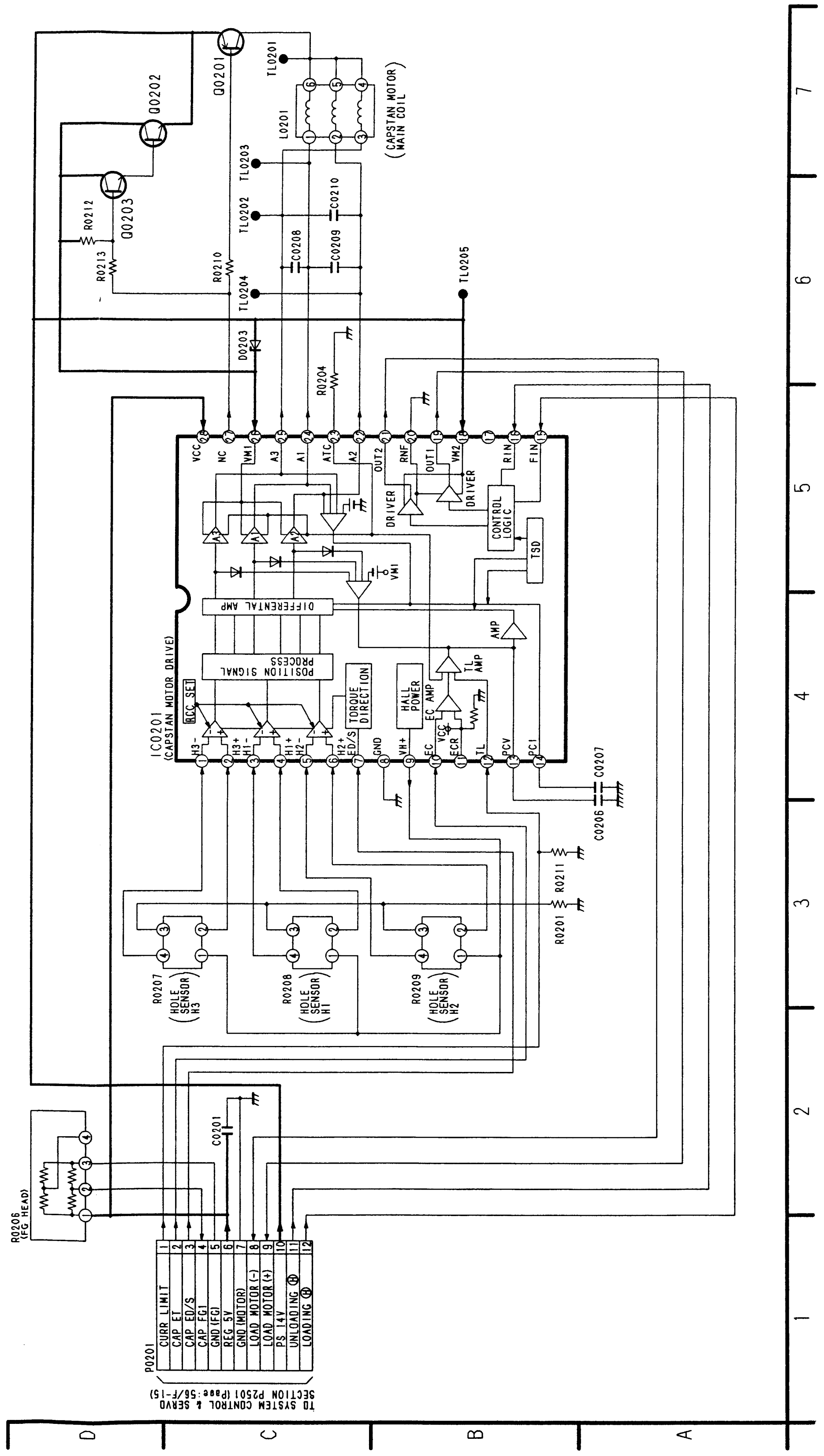
NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.11. CYLINDER STATOR UNIT SCHEMATIC DIAGRAM


CYLINDER SERVO SPEED LOOP
HALL IC
MAIN COIL 2
MAIN COIL 3
MAIN COIL 1
P2901
1 M2
2 VH+
3 M3
4 HE+
5 GND (CYL)
6 VM
7 VM
8 HE-
9 M1
TO SYSTEM CONTROL & SERVO SECTION P2502 (Page:56/C-15)
A
1
2
3

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

9.12. CAPSTAN UNIT SCHEMATIC DIAGRAM


Q0201
Q0202
Q0203
TL0201
L0201
(CAPSTAN MOTOR) (MAIN COIL)
TL0203
TL0202
C0210
C0208
C0209
R0212
R0213
R0210
TL0204
TL0205
D0203
R0204
IC0201 (CAPSTAN MOTOR DRIVE)
VCC
NC
VM1
A3
A1
ATC
A2
OUT2
RNF
OUT1
VM2
RIN
FIN
DRIVER
CONTROL LOGIC
TSD
VM1
DIFFERENTIAL AMP
AMP
POSITION SIGNAL PROCESS
ECC SET
TORQUE DIRECTION
HALL POWER
EC AMP
TL AMP
H3-
H3+
H1-
H1+
H2-
H2+
ED/S
GND
VH+
EC
ECR
VCC
TL
PCV
PC1
C0207
C0206
R0211
R0201
R0207 (HOLE SENSOR H3)
R0208 (HOLE SENSOR H1)
R0209 (HOLE SENSOR H2)
R0206 (FG HEAD)
C0201
P0201
1 CURR LIMIT
2 CAP FE
3 CAP ED/S
4 CAP FG1
5 GND (FG)
6 REG 5V
7 GND (MOTOR)
8 LOAD MOTOR (-)
9 LOAD MOTOR (+)
10 PS 14V
11 UNLOADING ⊕
12 LOADING ⊕
TO SYSTEM CONTROL & SERVO SECTION P2501 (Page:56/F-15)
7
6
5
4
3
2
1
D
C
B
A

10 CIRCUIT BOARD ASSEMBLIES

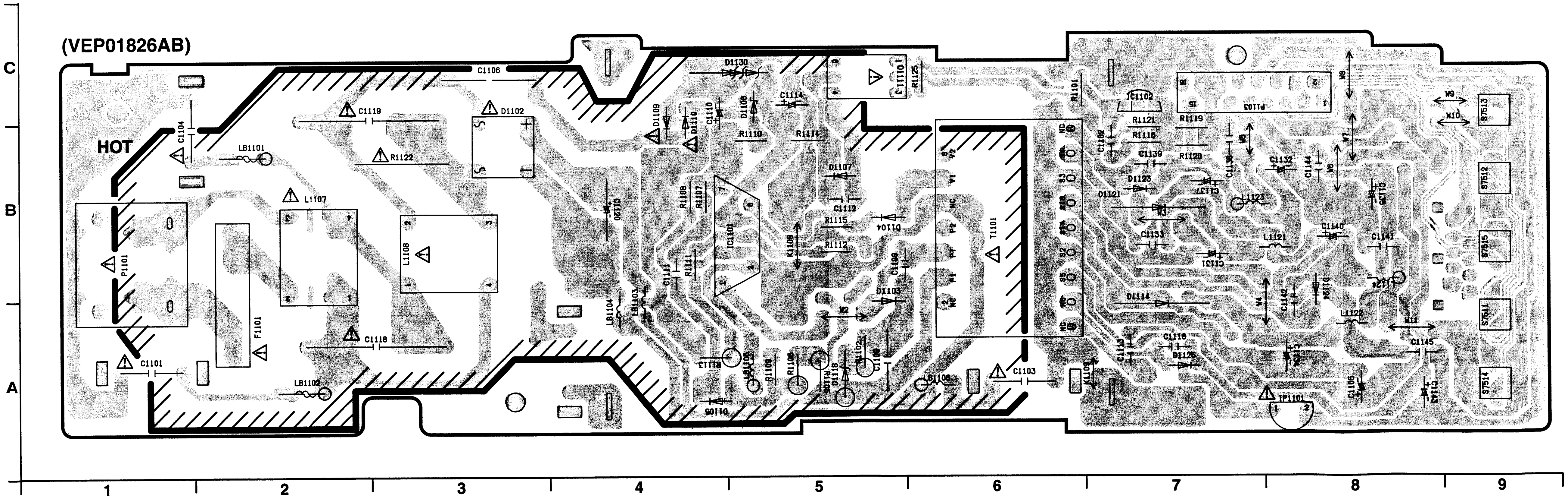
10.1. POWER C.B.A.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

CAUTION THE STRIPED FRAME INDICATES THE PRIMARY CIRCUIT TO DISTINGUISH THE PRIMARY FROM THE SECONDARY CIRCUIT.
PAY ATTENTION NOT TO RECEIVE AN ELECTRIC SHOCK DURING REPAIR AND SERVICE OF THE PRODUCTS.

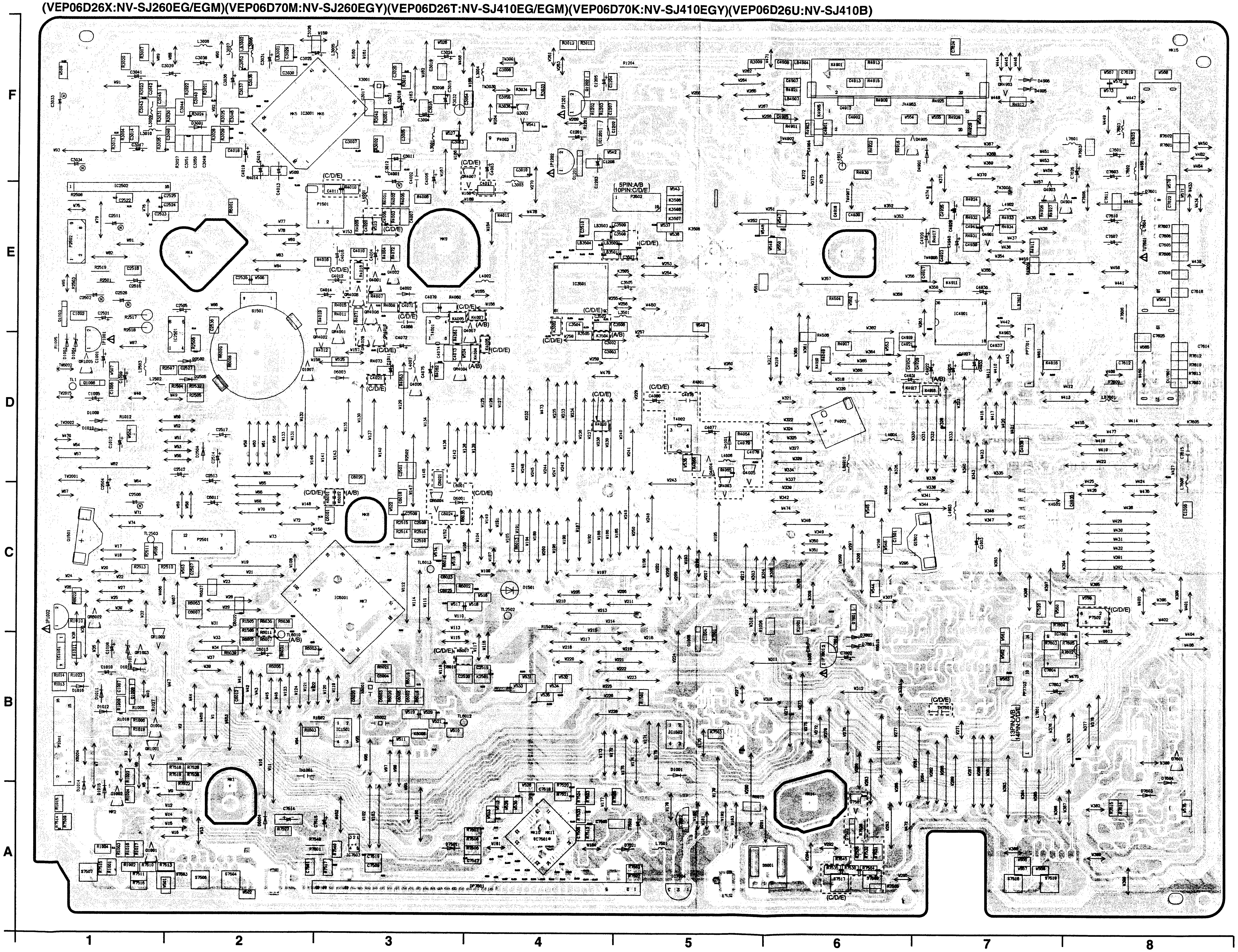
POWER C.B.A.	
Transistor	
Q1111	C-5
Integrated Circuit	
IC1101	B-5
IC1102	C-7
Connector	
P1101	B-1
P1103	C-7

ADDRESS INFORMATION


(VEP01826AB)
HOT
C
B
A
1
2
3
4
5
6
7
8
9
C1106
C1119
D1102
C1104
LB1101
R1122
L1107
L1108
P1101
F1101
C1118
C1101
LB1102
D1130
D1109
D1110
D1108
C1114
R1110
R1114
T1101
R1125
R1101
IC1101
R1108
R1107
C1111
R1111
K1108
D1107
C1112
R1115
R1112
D1104
C1108
D1103
LB1104
LB1103
D1118
R1109
R1106
C1109
LB1105
C1103
IC1102
P1103
R1121
R1116
R1119
C1139
R1120
C1138
C1132
C1144
D1123
D1121
C1133
L1123
L1121
C1140
C1141
C1131
D1114
C1142
L1122
C1116
D1125
C1145
C1113
C1105
C1143
IP1101
W8
W9
W10
W5
W7
W6
W4
W11
S7513
S7512
S7515
S7511
S7514

10.2. MAIN C.B.A.

(VEP06D26X:NV-SJ260EG/EGM)(VEP06D70M:NV-SJ260EGY)(VEP06D26T:NV-SJ410EG/EGM)(VEP06D70K:NV-SJ410EGY)(VEP06D26U:NV-SJ410B)

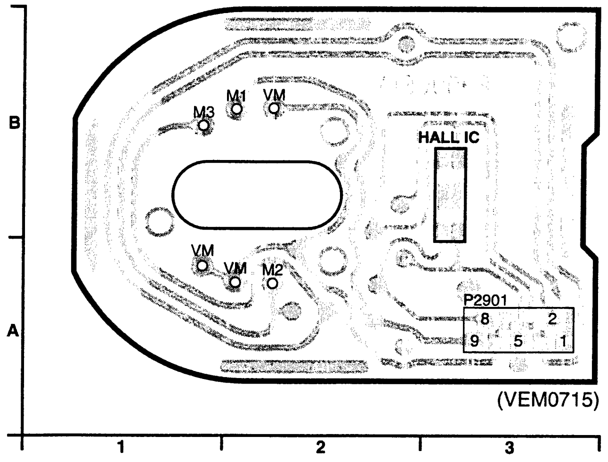

F
E
D
C
B
A
1
2
3
4
5
6
7
8
IC3001
IC2502
IC3501
IC4901
IC6001
IC7501
P1501
P2501
P2502
P3502
P4002
P7001
(C/D/E)
(A/B)
5PIN:A/B
10PIN:C/D/E
13PIN:A/B
14PIN:C/D/E

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

MAIN C.B.A.			
Transistor		**Integrated Circuit**	
Q1001	A-1	IC1001	B-1
Q1002	A-1	IC1201	F-4
Q1003	E-1	IC1501	B-3
Q1004	B-1	IC1502	B-5
Q1005	B-5	IC2501	D-2
Q1006	D-1	IC2502	E-1
Q1007	D-2	IC3001	F-2
Q1009	B-1	IC3501	E-4
Q1201	F-4	IC4901	E-7
Q1202	F-4	IC6001	C-3
Q1501	C-1	IC7501	A-4
Q1502	C-7	IC7502	A-5
Q3003	F-4	IC7503	A-3
Q4001	E-3	IC7504	A-5
Q4002	E-3	IC7801	B-8
Q4004	D-5	**Test Point**	
Q4005	D-5	TL1	D-1
Q4006	D-3	TL2502	C-4
Q4007	E-4	TL2503	C-1
Q4901	E-7	TL6010	B-2
Q4903	E-7	TL6012	B-4
Q4904	E-8	TL6013	C-3
Q4905	F-6	TW2001	D-1
Q7501	A-6	TW2002	D-1
Q7502	A-6	TW2015	D-1
Q7601	B-8	TW3001	F-4
Q7801	C-6	TW3002	E-7
Transistor & Resistor		TW3003	E-7
QR1001	B-1	TW3030	F-4
QR1002	B-1	TW4902	F-6
QR1003	B-1	TW4906	E-7
QR1005	D-1	TW4907	E-6
QR4001	D-3	TW6002	D-1
QR4002	D-3	**Connector**	
QR4003	C-5	P1001	B-1
QR4004	D-3	P1501	E-3
QR4006	E-3	P2501	D-2
QR4007	F-4	P2502	E-1
QR4008	E-3	P3502	E-5
QR4009	D-3	P4002	D-6
QR4010	D-3	P4003	F-4
QR4903	F-7	P7502	C-8
QR6002	C-1	DU7601	D-8
QR6004	C-3	PP7701	D-7
		PP7703	B-7
		TU7601	E-8

ADDRESS INFORMATION

10.3. CYLINDER STATOR UNIT


M1
VM
M3
HALL IC
VM
VM
M2
P2901
8
2
9
5
1
(VEM0715)
B
A
1
2
3

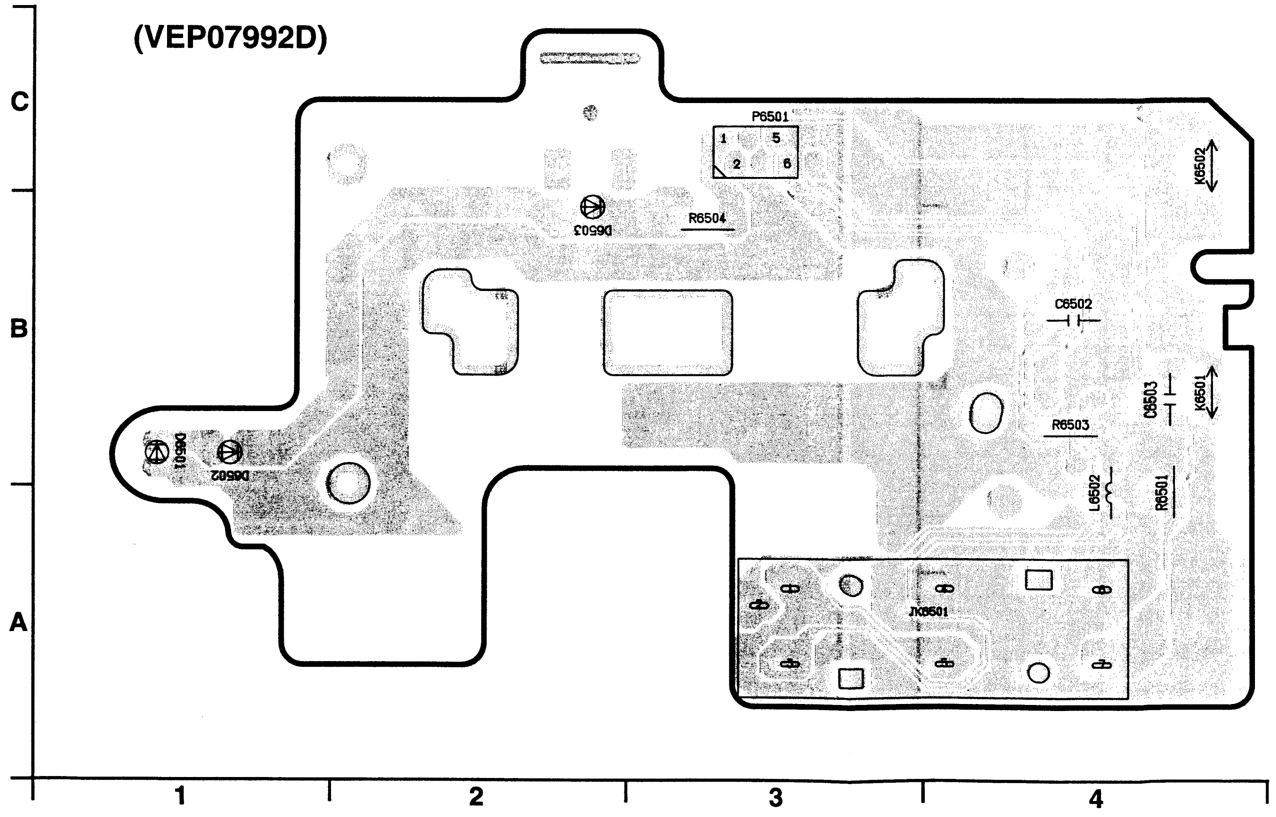
CYLINDER STATOR UNIT	
Integrated Circuit	
HALL IC	B-3
Connector	
P2901	A-3

ADDRESS INFORMATION

10.4. AV FRONT C.B.A. (NV-SJ410EG/EGM/EGY/B)

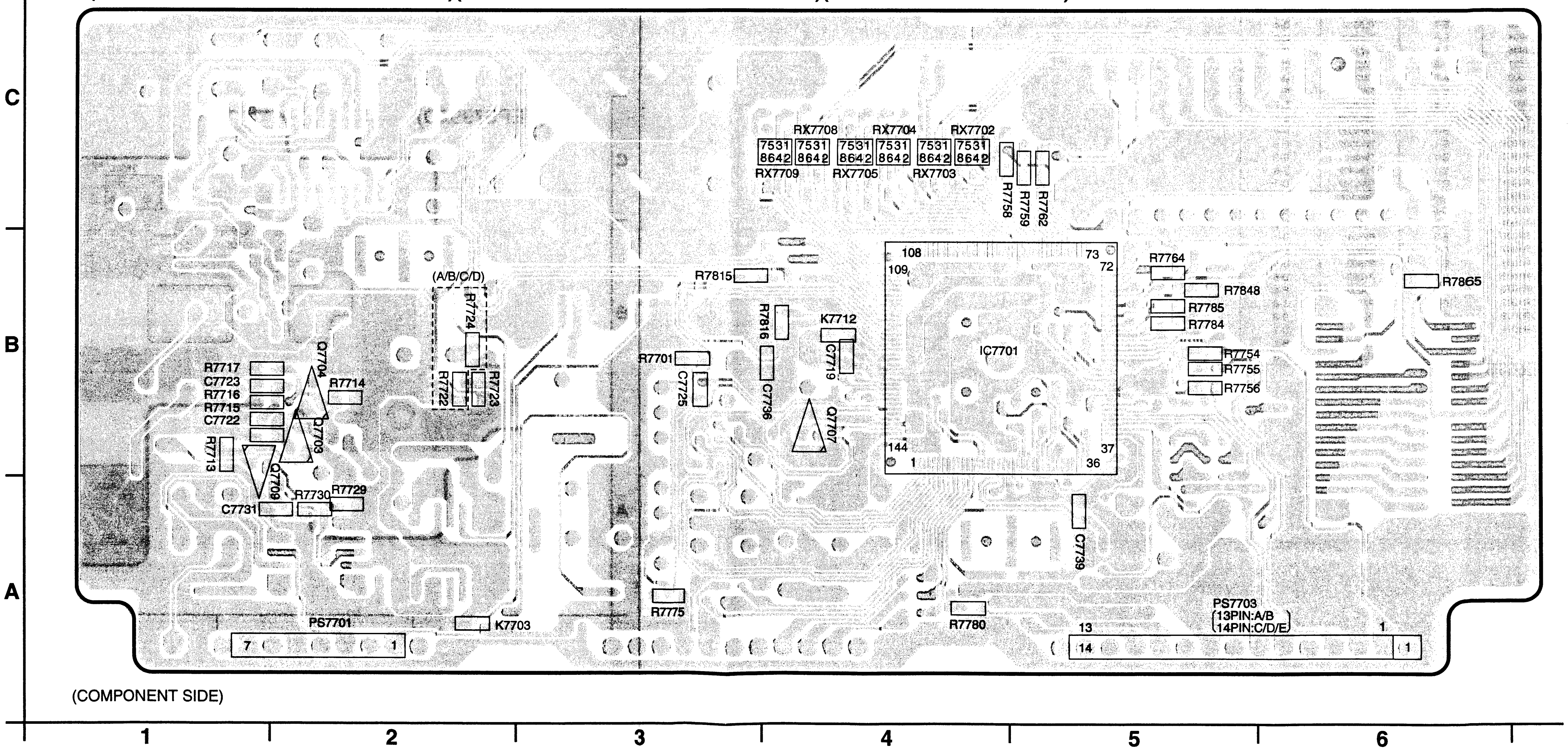
AV FRONT C.B.A.	
Connector	
P6501	C-3

ADDRESS INFORMATION


(VEP07992D)
P6501
1
5
2
6
D6503
R6504
K6502
C6502
C6503
K6501
R6503
L6502
R6501
D6501
D6502
JK6501
C
B
A
1
2
3
4

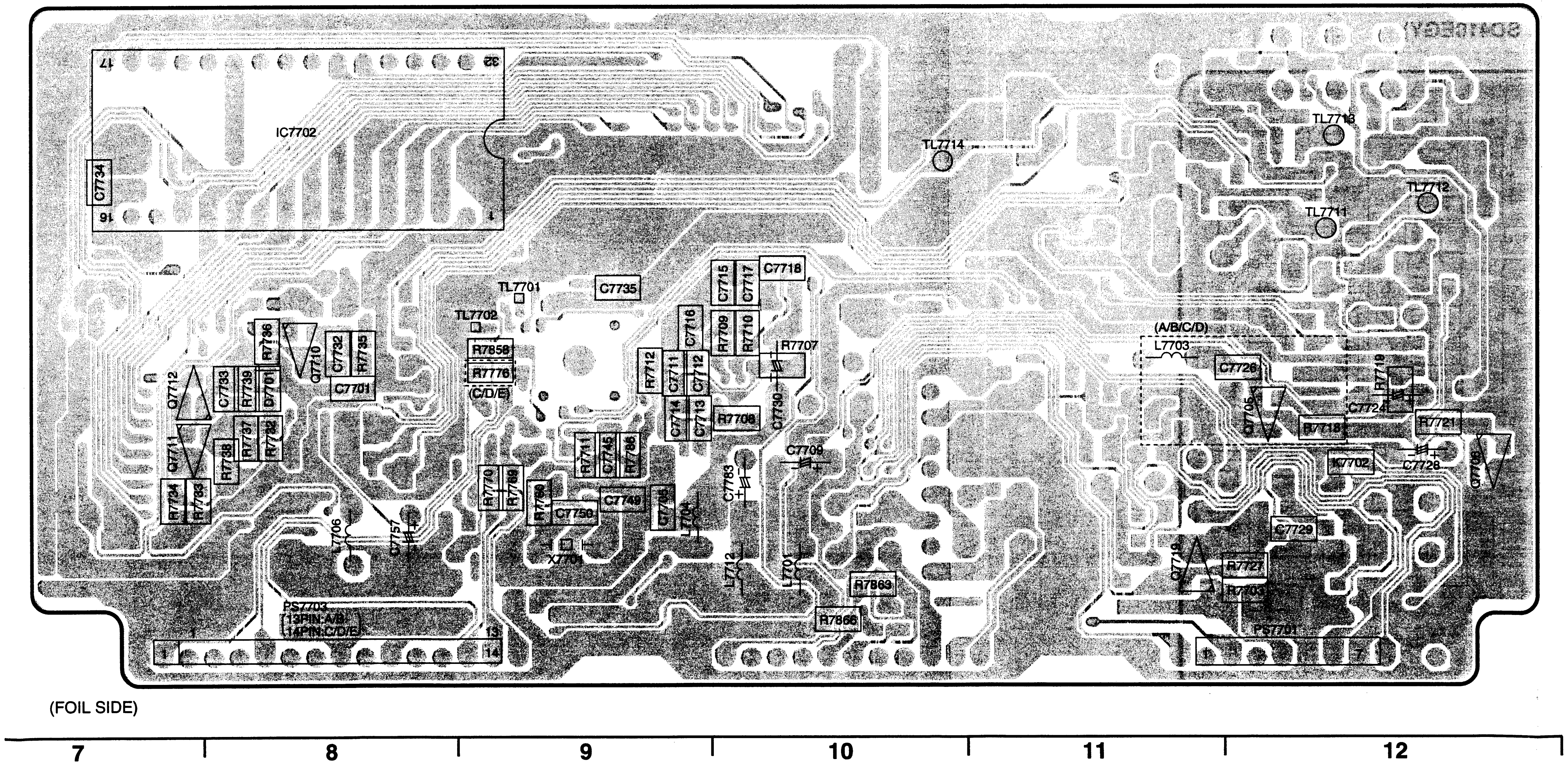
10.5. OSD PACK C.B.A.

(VEP07A12G:NV-SJ260EG/EGM/EGY)(VEP07A12K:NV-SJ410EG/EGM/EGY)(VEP07A12L:NV-SJ410B)


C
B
A
1
2
3
4
5
6
RX7708
RX7704
RX7702
7531 8642
RX7709
RX7705
RX7703
R7758
R7759
R7762
108
73
109
72
IC7701
144
1
37
36
R7764
R7848
R7785
R7784
R7754
R7755
R7756
R7865
R7815
R7816
K7712
C7719
R7701
C7725
C7736
Q7707
(A/B/C/D)
R7724
R7722
R7723
Q7704
R7717
C7723
R7716
R7715
C7722
R7714
R7713
Q7703
Q7709
R7730
R7729
C7731
C7739
R7775
R7780
PS7701
7
1
K7703
PS7703
13PIN:A/B
14PIN:C/D/E
13
14
1
(COMPONENT SIDE)

OSD PACK C.B.A.			
Transistor		**Test Point**	
Q7703	B-2	TL7701	B-9
Q7704	B-2	TL7702	B-9
Q7705	B-12	TL7711	C-12
Q7706	B-12	TL7712	C-12
Q7707	B-4	TL7713	C-12
Q7709	A-1	TL7714	C-10
Q7710	B-8	**Connector**	
Q7711	B-7	PS7701	A-2
Q7712	B-7	PS7701	A-12
Q7719	A-11	PS7703	A-5
Integrated Circuit		PS7703	A-8
IC7701	B-4		
IC7702	C-8		

ADDRESS INFORMATION



IC7702
17
32
16
1
C7734
TL7714
TL7713
TL7712
TL7711
TL7701
TL7702
C7735
C7718
C7715
C7717
C7716
R7709
R7710
R7707
R7712
C7711
C7712
C7714
C7713
R7708
C7730
C7709
R7858
R7776
(C/D/E)
R7736
Q7710
C7732
R7735
C7701
Q7712
C7733
R7739
D7701
Q7711
R7737
R7738
R7734
R7733
R7732
R7770
R7769
R7768
C7750
C7749
R7711
C7745
R7736
C7748
X7701
L7704
C7783
L7712
L7701
L7706
C7757
R7863
R7866
(A/B/C/D)
L7703
C7726
Q7705
R7719
C7724
R7718
R7721
IC7702
C7728
Q7706
C7729
Q7719
R7727
R7703
PS7701
PS7703
(13PIN:A/B)
(14PIN:C/D/E)
1
13
14
7
8
9
10
11
12

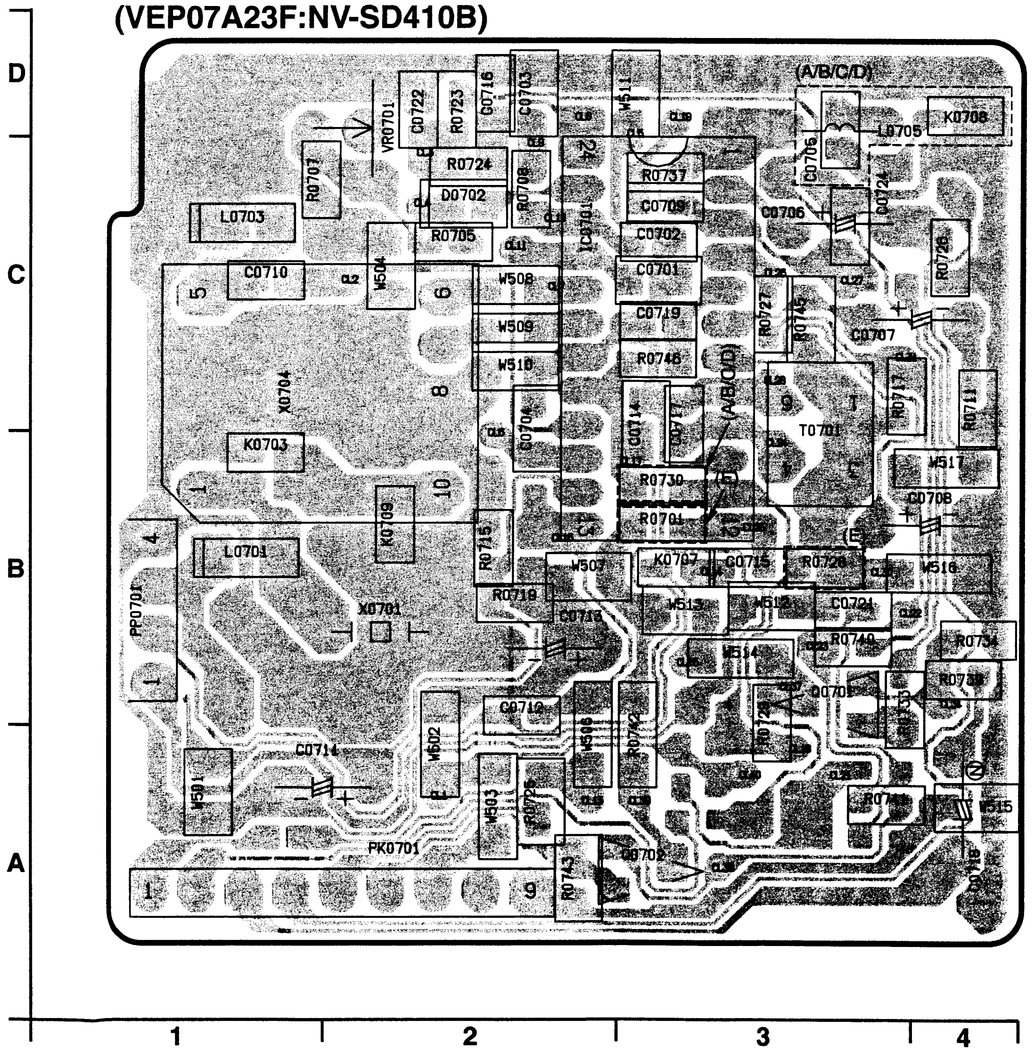
(FOIL SIDE)

10.6. TV DEMODULATOR PACK C.B.A.

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q0701	B-3
Q0702	A-3
Integrated Circuit	
IC0701	C-2
Adjustment	
T0701	B-3
VR0701	D-2
Connector	
PK0701	A-2
PP0701	B-1

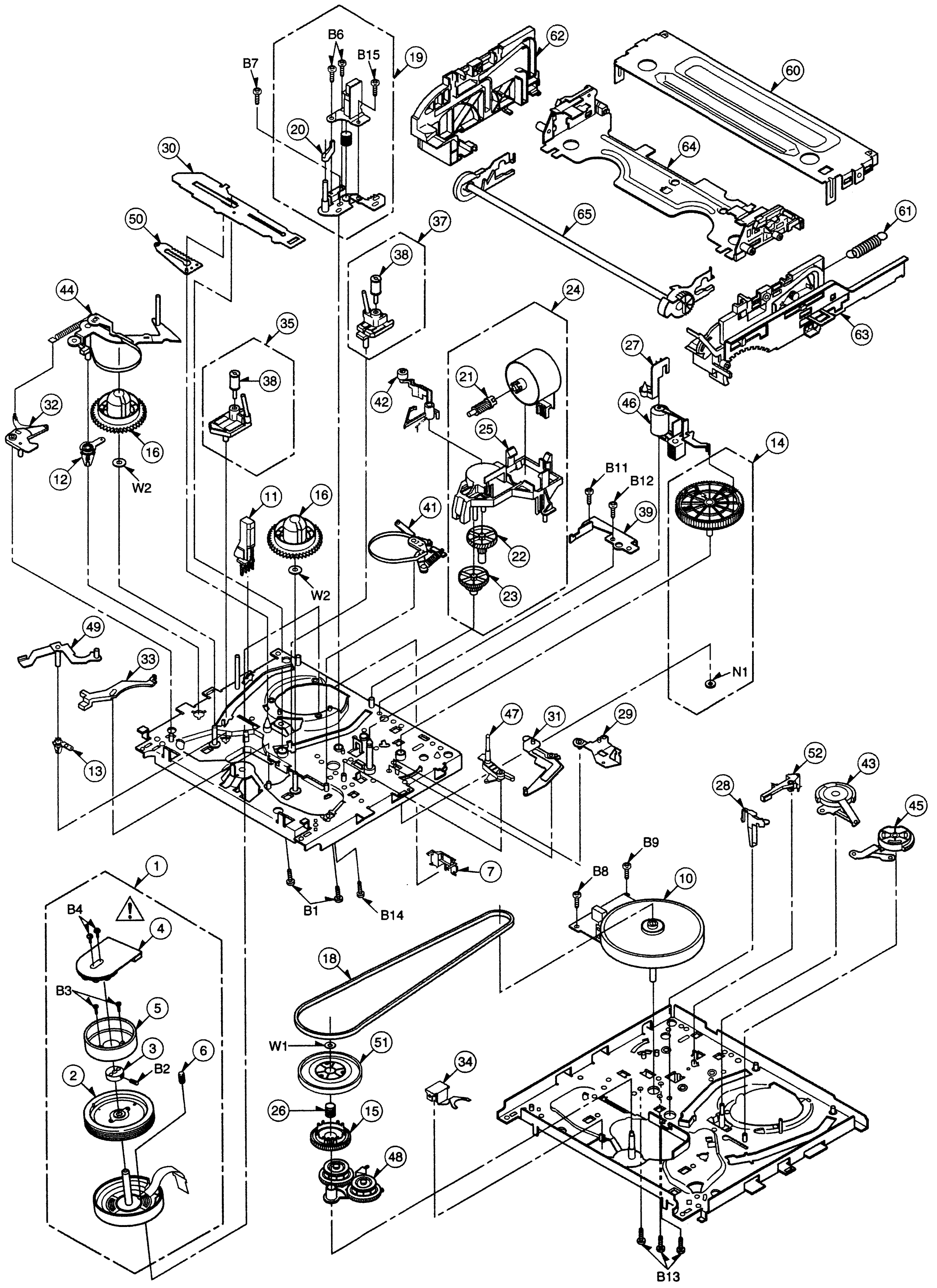
ADDRESS INFORMATION

(VEP07A23E:NV-SD260EG/EGM,SD410EG/EGM)
(VEP07A31A:NV-SD260EGY, SD410EGY)
(VEP07A23F:NV-SD410B)


D
C
B
A
1
2
3
4
VR0701
C0722
R0723
C0716
C0703
W511
(A/B/C/D)
L0705
K0706
R0707
R0724
D0702
R0708
IC0701
R0737
C0709
C0706
C0724
L0703
R0705
C0702
R0725
C0710
W504
W508
C0701
R0727
R0745
C0707
W509
C0719
W510
R0746
X0704
(A/B/C/D)
R0717
R0711
K0703
C0704
C0714
T0701
R0730
W517
R0701
C0708
K0709
R0715
L0701
W507
K0707
C0715
R0720
W516
PP0701
R0719
W513
W512
C0721
X0701
C0718
W514
R0740
R0734
Q0701
R0738
C0712
R0728
W502
W506
R0742
C0711
W501
W503
R0726
R0741
W515
PK0701
Q0702
R0743
C0718

11 EXPLODED VIEWS & MECHANICAL REPLACEMENT PARTS LIST

11.1. CHASSIS PARTS SECTION

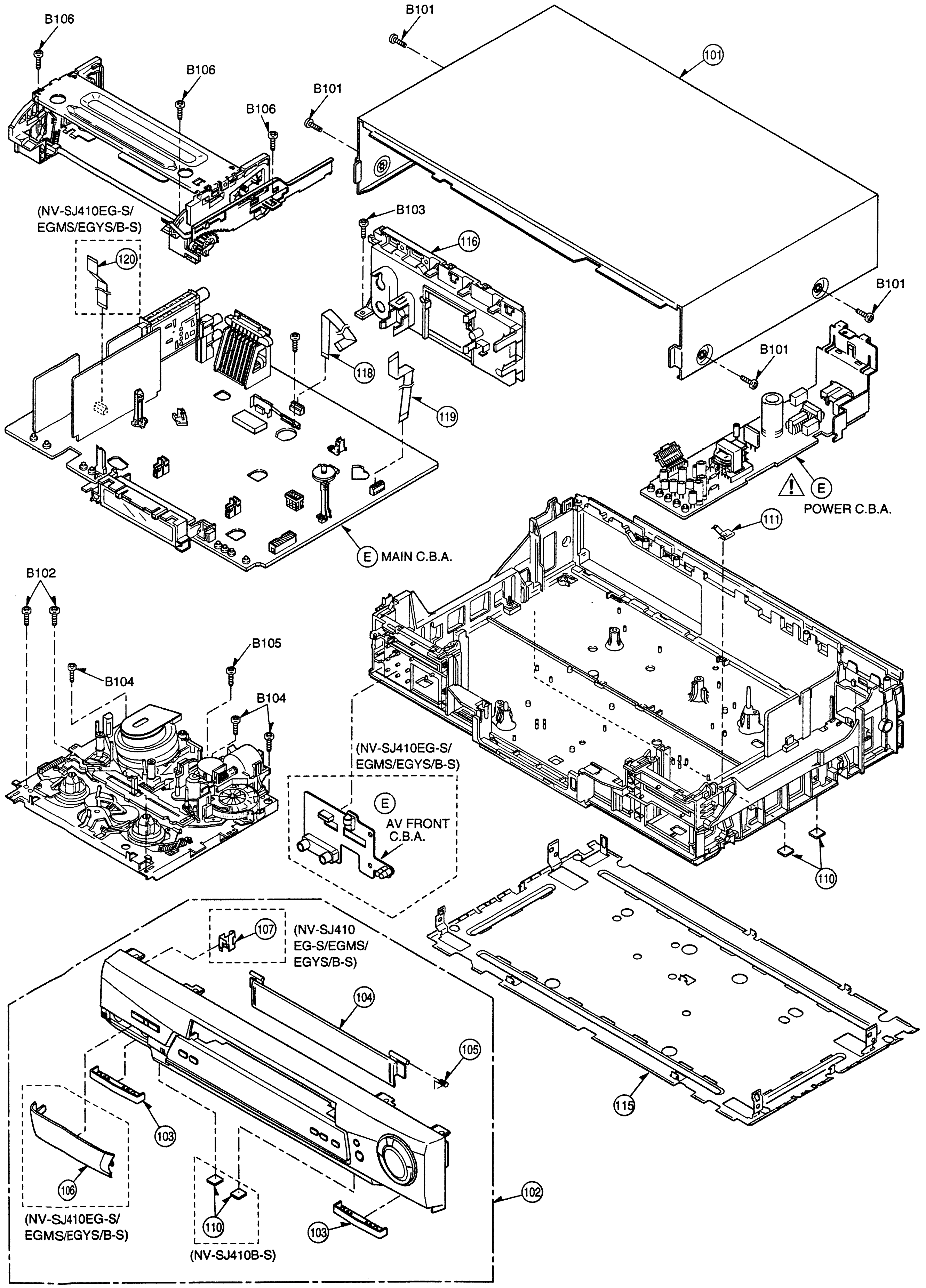


Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1 (1)	VEG1524	CYLINDER UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
1 (1)	VEG1523	CYLINDER UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
2 (1)	VXP1558	UPPER CYLINDER UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
2 (1)	VXP2002	UPPER CYLINDER UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
3 (1)	VDB1256	CYLINDER RETAINER	1	
⚠ 4 (1)	VEM0715	CYLINDER MOTOR UNIT	1	[SUPPLIED FROM MBV]
6 (1)	VXS0135	EARTH BRUSH UNIT	1	
10 (1)	VEK8841	CAPSTAN UNIT	1	[SUPPLIED FROM MBV]
11 (1)	VBS0155	FE HEAD	1	
12 (1)	VDB1431	TENSION ARM BOSS	1	
13 (1)	VDB1460	SUPPLY BRAKE ARM BOSS	1	
14 (1)	VDG1220KIT	MAIN CAM GEAR	1	
15 (1)	VDG1221	CONVERSION GEAR	1	
16 (1)	VDR0350	SUPPLY/TAKE-UP REEL TABLE	2	
18 (1)	VDV0382	CAPSTAN BELT	1	[SUPPLIED FROM MBV]
19 (1)	VED0412	A/C HEAD UNIT	1	
20 (1)	VMX2656	P4 CAP	1	
21 (1)	VDG1217	WORM GEAR	1	
22 (1)	VDG1218	WORM WHEEL GEAR	1	
23 (1)	VDG1219	CENTRE GEAR	1	
24 (1)	VEM0604	LOADING MOTOR UNIT	1	[SUPPLIED FROM MBV]
25 (1)	VMD2619	MOTOR BRACKET	1	
26 (1)	VMB3045	CONVERESION GEAR SPRING	1	
27 (1)	VMD2620	OPENER PIECE	1	
28 (1)	VMD2738	LED PRISM	1	
29 (1)	VML3165	DRIVE RACK ARM	1	[SUPPLIED FROM MBV]
30 (1)	VML3166	MAIN LEVER	1	[SUPPLIED FROM MBV]
31 (1)	VML3167	DRIVE MAIN LEVER ARM	1	[SUPPLIED FROM MBV]
32 (1)	VML3172	SUPPLY SPRING ARM	1	[SUPPLIED FROM MBV]
33 (1)	VML3176	CONVERSION LEVER A	1	[SUPPLIED FROM MBV]
34 (1)	VML3177	CONVERSION LEVER B	1	[SUPPLIED FROM MBV]
35 (1)	VXA6040	INCLINED BASE (S) UNIT	1	
37 (1)	VXA5854	INCLINED BASE (T) UNIT	1	
38 (1)	VXP1840	ROLLER POST	2	
39 (1)	VMA9672	SUPPORT ANGLE	1	
41 (1)	VXL2667	TAKE UP BRAKE ARM UNIT	1	
43 (1)	VXL2670	TAKE UP LOADING ARM UNIT	1	
44 (1)	VXL2798	TESION ARM UNIT	1	[SUPPLIED FROM MBV]
45 (1)	VXL2672	SUPPLY LOADING	1	
46 (1)	VXL2785	PINCH ARM UNIT	1	[SUPPLIED FROM MBV]
47 (1)	VXL2996	P5 ARM UNIT	1	[SUPPLIED FROM MBV]
48 (1)	VXL2792	IDLER ARM UNIT	1	[SUPPLIED FROM MBV]
49 (1)	VXL2733	SUPPLY BRAKE ARM UNIT	1	
50 (1)	VXL2747	LOADING RACK UNIT	1	
51 (1)	VXP2035	CENTRE CLUTHCH UNIT	1	
60 (1)	VMA9516	TOP PLATE	1	
61 (1)	VMB3047	CONNECTION SPRING	1	
62 (1)	VMD3379	SIDE PLATE (L)	1	[SUPPLIED FROM MBV]
63 (1)	VXA6607	SIDE PLATE (R) UNIT	1	
64 (1)	VXA5746	CASSETTE HOLDER UNIT	1	
65 (1)	VXP1730	MAIN SHAFT UNIT	1	
70 (1)	VDP1668	CLEANER ROLLER	1	[SUPPLIED FROM MBV]
71 (1)	VML3164	CLEANER ARM	1	[SUPPLIED FROM MBV]
72 (1)	VMD3796	FPC HOLDER (5P)	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
72 (1)	VMD3795	FPC HOLDER (10P)	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
B1 (1)	VHD1117	SCREW	2	
B2 (1)	VHD0842	SCREW	1	
B3 (1)	VHD0843	SCREW	2	
B4 (1)	VHD0844	SCREW	2	
B6 (1)	VHD1066	SCREW	2	
B7 (1)	VHD1044	SCREW	1	
B8 (1)	VHD1060	SCREW	1	
B9 (1)	VHD1071	SCREW	1	
B11 (1)	XTS26+6F	SCREW	1	
B12 (1)	XTN26+6F	SCREW	1	
B13 (1)	XTN26+7J	SCREW	3	
B14 (1)	VHD1095	SCREW	1	
B15 (1)	VHD1185	SCREW	1	
N1 (1)	VHN0311	PUSH NUT	1	
W1 (1)	VMX2208	WASHER	1	[SUPPLIED FROM MBV]
W2 (1)	VMX2650	WASHER	2	

11.2. CASING PARTS SECTION

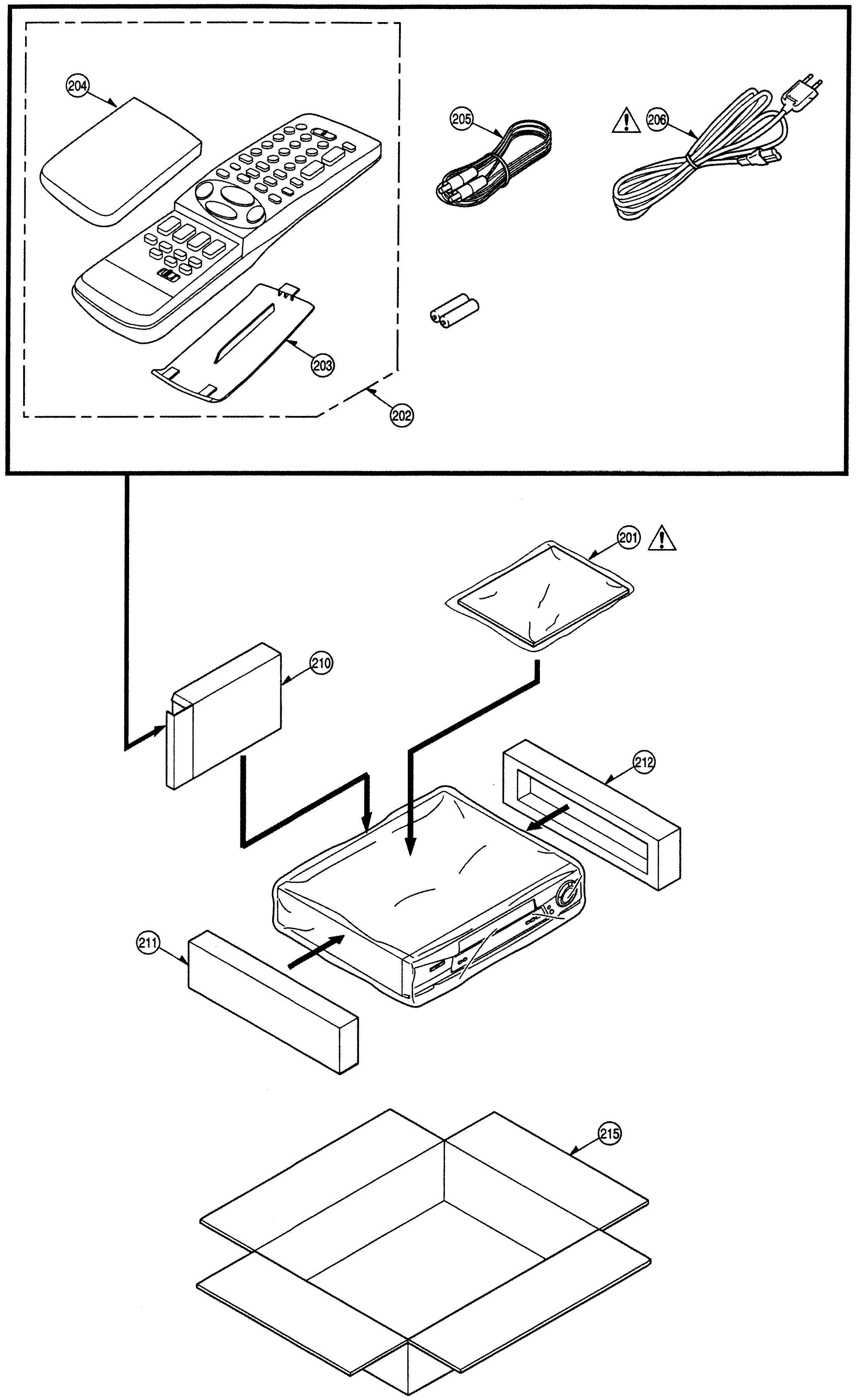

B106
B101
B106
B101
101
B106
(NV-SJ410EG-S/
EGMS/EGYS/B-S)
120
B103
116
B101
118
119
B101
E
POWER C.B.A.
111
E MAIN C.B.A.
B102
B105
B104
B104
(NV-SJ410EG-S/
EGMS/EGYS/B-S)
E
AV FRONT
C.B.A.
110
107
(NV-SJ410
EG-S/EGMS/
EGYS/B-S)
104
105
115
103
106
102
(NV-SJ410EG-S/
EGMS/EGYS/B-S)
110
103
(NV-SJ410B-S)

Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
101 (2)	VGM1466	TOP PANEL	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
101 (2)	VGM1556	TOP PANEL	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
102 (2)	VYP7617	FRONT PANEL UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
102 (2)	VYP7618	FRONT PANEL UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ410EG-S/EGMS/EGYS
102 (2)	VYP7619	FRONT PANEL UNIT	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
103 (2)	VKA0191	LEG	2	
104 (2)	VKF3037	BLINDER PANEL	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
104 (2)	VKF3011	BLINDER PANEL	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
105 (2)	VMB2521	BLINDER SPRING	1	
106 (2)	VKF3180	DOOR	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
107 (2)	VMC1289	JACK EARTH SPRING	1	NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
110 (2)	RKA0072	FOOT	2	NV-SJ260EG-K/EGMK/EGYK
				NV-SJ410EG-S/EGMS/EGYS
110 (2)	RKA0072	FOOT	4	NV-SJ410B-S
111 (2)	VMC1065	EARTH SPRING	1	
115 (2)	VKU0519	BOTTOM PLATE	1	
116 (2)	VJH1023	JACK PLATE	1	[SUPPLIED FROM MBV]
118 (2)	VWJ1281	FLAT CARD CABLE (6P)	1	[SUPPLIED FROM MBV]
				P4003-A/C HEAD
119 (2)	VWJ1282	FLAT CARD CABLE (9P)	1	[SUPPLIED FROM MBV]
				P2502-P2901
120 (2)	VWJ1283	FLAT CARD CABLE (6P)	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
			1	NV-SJ410EG-S/EGMS/EGYS
				P7502-P6501
B101 (2)	XTW3+10TFZ	SCREW	4	NV-SJ260EG-K/EGMK/EGYK
B101 (2)	XTW3+10TFC	SCREW	4	NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS
B102 (2)	VHD0168	SCREW	2	
B103 (2)	VHD0773	SCREW	1	
B104 (2)	VHD1065	SCREW	3	
B105 (2)	XTV26+6FR	SCREW	1	
B106 (2)	XTV26+8FR	SCREW	3	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

11.3. PACKING PARTS SECTION



Note: 1. *Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠ 201 (3)	VQT8512	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(GERMAN)		NV-SJ260EG-K/EGMK/EGYK
⚠ 201 (3)	VQT8517	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(SWEDISH)		NV-SJ260EG-K/EGMK/EGYK
⚠ 201 (3)	VQT8516	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(DUTCH)		NV-SJ260EG-K/EGMK
⚠ 201 (3)	VQT8514	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(SPANISH)		NV-SJ260EG-K
⚠ 201 (3)	VQT8519	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(FINNISH)		NV-SJ260EG-K
⚠ 201 (3)	VQT8520	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(PORTUGUESE)		NV-SJ260EG-K
⚠ 201 (3)	VQT8521	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(GREEK)		NV-SJ260EG-K
⚠ 201 (3)	VQT8513	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(FRENCH)		NV-SJ260EGMK/EGYK
⚠ 201 (3)	VQT8518	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(DANISH)		NV-SJ260EGMK
⚠ 201 (3)	VQT8511	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(ENGLISH)		NV-SJ260EGYK
⚠ 201 (3)	VQT8515	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(ITALIAN)		NV-SJ260EGYK
⚠ 201 (3)	VQT8528	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(GERMAN)		NV-SJ410EG-S/EGMS/EGYS
⚠ 201 (3)	VQT8529	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(FRENCH)		NV-SJ410EG-S/EGMS/EGYS
⚠ 201 (3)	VQT8533	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(SWEDISH)		NV-SJ410EG-S/EGMS/EGYS
⚠ 201 (3)	VQT8532	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(DUTCH)		NV-SJ410EG-S/EGMS
⚠ 201 (3)	VQT8531	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(ITALIAN)		NV-SJ410EG-S/EGYS
⚠ 201 (3)	VQT8530	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(SPANISH)		NV-SJ410EG-S
⚠ 201 (3)	VQT8535	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(FINNISH)		NV-SJ410EG-S
⚠ 201 (3)	VQT8536	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(PORTUGUESE)		NV-SJ410EG-S
⚠ 201 (3)	VQT8537	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(GREEK)		NV-SJ410EG-S
⚠ 201 (3)	VQT8534	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(DANISH)		NV-SJ410EGMS
⚠ 201 (3)	VQT8527	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(ENGLISH)		NV-SJ410EGYS
⚠ 201 (3)	VQT8523	OPERATING INSTRUCTIONS	1	[SUPPLIED FROM MBV]
		(ENGLISH)		NV-SJ410B-S
202 (3)	EUR571742	REMOTE CONTROLLER	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
			1	NV-SJ410EG-S/EGMS/EGYS
202 (3)	EUR571747	REMOTE CONTROLLER	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
203 (3)	UR57EC679F	BATTERY COVER	1	[SUPPLIED FROM MBV]
204 (3)	UR57CV680C	DOOR PANEL	1	[SUPPLIED FROM MBV]
205 (3)	VJA0728	DIN RF CABLE	1	[SUPPLIED FROM MBV]
⚠ 206 (3)	VJA1059	AC CORD	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
				NV-SJ410EG-S/EGMS/EGYS
⚠ 206 (3)	VJA1022	AC CORD	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
210 (3)	VPK2246	ACCESSORIES PACKING	1	[SUPPLIED FROM MBV]
211 (3)	VPN5340	CUSHION (L)	1	[SUPPLIED FROM MBV]
212 (3)	VPN5341	CUSHION (R)	1	[SUPPLIED FROM MBV]
215 (3)	VPG0C87	PACKING	1	[SUPPLIED FROM MBV]
				NV-SJ260EG-K/EGMK/EGYK
215 (3)	VPG0C86	PACKING	1	[SUPPLIED FROM MBV]
				NV-SJ410B-S
				NV-SJ410EG-S/EGMS/EGYS

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
		SERVICE FIXTURES & TOOLS		
	VFJ8125H3F	VHS ALIGNMENT TAPE (PAL)	1	
	VFK0335	RETAINING RING REMOVER	1	
		(3mm/4mm)	1	
	VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
	VFK0326	HEX WRENCH SET	1	
	VFK0132	BACK TENSION METER	1	
	VFK27	HEAD CLEANING STICK	1	
	VFK1024	MOLYTONE GREASE	1	
	VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	
	VFK2744	16P EXTENSION CABLE	1	MAIN - POWER
	VFK1301	SILICONE GREASE	1	

12 ELECTRICAL REPLACEMENT PARTS LIST

Note: 1. Be sure to make your orders of replacement parts according to this list.
2. IMPORTANT SAFETY NOTICE: Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components, use only the same type.
3. Unless otherwise specified,
All resistors are in OHMS, K=1.000 OHMS. All capacitors are in MICROFARADS (uf). P=uuF.
4. The P.C. Board units marked width "■" show below the main assembled parts.
5. The marking (RTL) indicaters the retention time is limited for this item.
Alter the discontinuation of this assembly in production. it will no longer be available.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
		MAIN C.B.A.		
■	VEP06D26X	MAIN C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ260EG-K/EGMK THE FOLLOWING C.B.A.S ARE INCLUDED IN MAIN C.B.A. VEP07A12G VEP07A23E
■	VEP06D70M	MAIN C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ260EGYK THE FOLLOWING C.B.A.S ARE INCLUDED IN MAIN C.B.A. VEP07A12G VEP07A31A
■	VEP06D26T	MAIN C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410EG-S/EGMS THE FOLLOWING C.B.A.S ARE INCLUDED IN MAIN C.B.A. VEP07A12K VEP07A23E
■	VEP06D70K	MAIN C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410EGYS THE FOLLOWING C.B.A.S ARE INCLUDED IN MAIN C.B.A. VEP07A12K VEP07A31A
■	VEP06D26U	MAIN C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410B-S THE FOLLOWING C.B.A.S ARE INCLUDED IN MAIN C.B.A. VEP07A12L VEP07A23F
		OSD C.B.A.		
■	VEP07A12G	OSD C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ260EG-K/EGMK/EGYK INCLUDED IN MAIN C.B.A. (VEP06D26X, VEP06D70M).
■	VEP07A12K	OSD C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410EG-S/EGMS/EGYS INCLUDED IN MAIN C.B.A. (VEP06D26T, VEP06D70K).
■	VEP07A12L	OSD C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410B-S INCLUDED IN MAIN C.B.A. (VEP06D26U).
		TV DEMODULATOR PACK C.B.A.		
■	VEP07A23E	TV DEMODULATOR PACK C.B.A	1	[SUPPLIED FROM MBV] (RTL) NV-SJ260EG-K/EGMK NV-SJ410EG-S/EGMS INCLUDED IN MAIN C.B.A. (VEP06D26X/T).
■	VEP07A31A	TV DEMODULATOR PACK C.B.A	1	[SUPPLIED FROM MBV] (RTL) NV-SJ260EGYK NV-SJ410EGYS INCLUDED IN MAIN C.B.A. (VEP06D70M/K).
■	VEP07A23F	TV DEMODULATOR PACK C.B.A	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410B-S INCLUDED IN MAIN C.B.A. (VEP06D26U).
		AV FRONT C.B.A.		
■	VEP07992D	AV FRONT C.B.A.	1	[SUPPLIED FROM MBV] (RTL) NV-SJ410EG-S/EGMS NV-SJ410EGYS/B-S
		POWER C.B.A.		
⚠ ■	VEP01826AB	POWER C.B.A.	1	[SUPPLIED FROM MBV] (RTL)
		CYLINDER STATOR C.B.A.		
■	————	CYLINDER STATOR C.B.A.	1	INCLUDED IN CYLINDER MOTOR UNIT (VEM0715).
		CAPSTAN DRIVE C.B.A.		
■	————	CAPSTAN DRIVE C.B.A.	1	INCLIDED IN CAPSTAN UNIT (VEK8841).
⚠TU7601	ENG47307G1	TUNER	1	[SUPPLIED FROM MBV] NV-SJ260EG-K/EGMK NV-SJ410EG-S/EGMS
⚠TU7601	ENG47306G1	TUNER	1	[SUPPLIED FROM MBV] NV-SJ260EGYK NV-SJ410EGYS
⚠TU7601	ENG47308G1	TUNER	1	[SUPPLIED FROM MBV] NV-SJ410B-S
■	VEP06D26X	MAIN C.B.A.		[SUPPLIED FROM MBV] (RTL) NV-SJ260EG-K/EGMK
C0701	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C0702	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C0703	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C0704	ECUM1E333KBN	C. CAPACITOR CH 25V 0.033U	1	
C0705	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C0706	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C0707	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1	
C0708	ECEA1HKAR47	E. CAPACITOR 50V 0.47U	1	
C0709	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C0710	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C0711	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C0712	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C0713	EEUFA1A391	E. CAPACITOR 10V 390U	1	
C0714	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C0715	ECUX1H030CCV	C. CAPACITOR CH 50V 3P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C0716	ECUM1H223KBV	C. CAPACITOR CH 50V 0.022U	1	[SUPPLIED FROM MBV]
C0717	ECUM1H330GUV	C. CAPACITOR CH 50V 33P	1	
C0718	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C0719	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1	
C0721	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	1	
C0722	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
C0724	ECUX1H221KBV	C. CAPACITOR CH 50V 220P	1	
C1001	ECEA1AKG220	E. CAPACITOR 10V 22U	1	
C1002	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1003	ECEA1CGE470	E. CAPACITOR 16V 47U	1	
C1004	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1005	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C1006, 07	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C1008	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C1009	ECEA1AKA470	E. CAPACITOR 10V 47U	1	
C1010	ECEA1VGE470	E. CAPACITOR 35V 47U	1	
C1011, 12	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C1201	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C1202	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1203	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C1204	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1205	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C1206, 07	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C1208	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1501	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C2501	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C2502	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2504	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C2505	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2506	ECEA1HKNR47	E. CAPACITOR 50V 0.47U	1	
C2507-10	ECUM1H563ZFN	C. CAPACITOR CH 50V 0.056U	4	
C2511	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2512	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C2513	ECEA1EKS4R7	E. CAPACITOR 25V 4.7U	1	
C2514	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C2516	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C2517	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C2518	ECUM1H473ZFN	C. CAPACITOR CH 50V 0.047U	1	
C2519	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2521	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C2522	ECUM1E683KBN	C. CAPACITOR CH 25V 0.068U	1	
C2523-25	ECUM1C154KBN	C. CAPACITOR CH 16V 0.15U	3	
C2526	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2527	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C2535, 36	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C3002, 03	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C3004	ECEA1HKA3R3	E. CAPACITOR 50V 3.3U	1	
C3005	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C3007	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3008	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3011	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C3012, 13	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C3014	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3015	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C3016	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C3017	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3018	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3019	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3020	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C3021	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
C3024	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3025	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3026	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3029	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3030	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C3031	ECEA1HKAR47	E. CAPACITOR 50V 0.47U	1	
C3033, 34	ECEA1EKN4R7	E. CAPACITOR 25V 4.7U	2	
C3035	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3036	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C3037	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3038	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3039	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3040	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C3041	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3042	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C3043	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3044	ECUM1H821JCN	C. CAPACITOR CH 50V 820P	1	
C3045	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C3046	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3047	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3048	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C3049	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C3050	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C3051	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3052	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3054, 55	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C3504	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3505	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C3506	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3509, 10	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C4001	ECEA1HKN010	E. CAPACITOR 50V 1U	1	
C4002	ECQB1H822JF	P. CAPACITOR 50V 8200P	1	
C4003	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4004	ECEA1EKA4R7	E. CAPACITOR 25V 4.7U	1	
C4006	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C4007	ECUM1H122JCN	C. CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C4010	ECUM1H153KBN	C. CAPACITOR CH 50V 0.015U	1	
C4012	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4013	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C4014	ECEA1HKA0R1	E. CAPACITOR 50V 0.1U	1	
C4015	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C4016	ECEA1HKA0R1	E. CAPACITOR 50V 0.1U	1	
C4018	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4019	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C4068	ECQB1H223JF	P. CAPACITOR 50V 0.022U	1	
C4070	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C4072	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C4073	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	1	
C4074	ECUM1H152JCN	C. CAPACITOR CH 50V 1500P	1	
C4075	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C4901, 02	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	2	
C4904	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1	
C4905	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4907	ECUM1H181JCN	C. CAPACITOR CH 50V 180P	1	
C4908	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C4912, 13	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	2	
C4917-19	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	3	
C4920	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4921	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C4922	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C4923, 24	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C4925	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4926	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C4927	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4928	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1	
C4929, 30	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C4931	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4933	ECEA1CKA470	E. CAPACITOR 16V 47U	1	
C4935	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4936	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C4937	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C4938	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C4939	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C4940	ECEA0JKA331	E. CAPACITOR 6.3V 330U	1	
C4941	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C6001	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C6002	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6003	ECUM1H200JCN	C. CAPACITOR CH 50V 20P	1	
C6004	ECUM1H120JCN	C. CAPACITOR CH 50V 12P	1	
C6005	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6007	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C6011	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C6012	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6013	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6018	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6019	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
C6020	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C6022	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C6023	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6025	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7501	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7505	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7506	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7509	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514	VCE0073	SUPER CAPACITOR	1	
C7515	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7517,18	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7519	ECUM1H683ZFN	C.CAPACITOR CH 50V 0.068U	1	
C7520	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7601	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7602	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7603	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7605,06	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7607	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7608	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7609	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7610	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7611	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7612	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7614	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C7615	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C7618	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C7619	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7622	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7624,25	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7626	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7701	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7705	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7709	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7711	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7712,13	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7714	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7715	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7716	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7717	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7718	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7719	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7722,23	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C7724	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7725	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7726	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7728	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7729	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7730	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7731	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C7732,33	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C7734,35	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7736	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7739	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7745	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7749,50	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	2	
C7757	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7783	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7784	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7786	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7801	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7802	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C7803	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7804	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D0702	MA77	DIODE	1	
D1003	1SS254	DIODE	1	
D1004	MA4051N-H	DIODE	1	[SUPPLIED FROM MBV]
D1006	MA4130N-L	DIODE	1	[SUPPLIED FROM MBV]
D1009	MA4051N-M	DIODE	1	
D1010	1SS254	DIODE	1	
D1011,12	11ES1	DIODE	2	
D1015,16	1SS254	DIODE	2	
D1017	MA4120N-M	DIODE	1	
D1018	1SS254	DIODE	1	
D1501	SIR505S	DIODE	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
D2502	1SS254	DIODE	1	
D2504,05	1SS254	DIODE	2	
D3001	1SS254	DIODE	1	
D4905,06	MA4075N-M	DIODE	2	[SUPPLIED FROM MBV]
D6004	RB441P	DIODE	1	
D7521	MA4220N-M	DIODE	1	[SUPPLIED FROM MBV]
D7601	MA4300M	DIODE	1	
D7603,04	1SS254	DIODE	2	
D7701	1SS355	DIODE	1	
D7801	MA4051N-M	DIODE	1	
D7802	1SS254	DIODE	1	
DP7501	VSL0533-B	FIP	1	[SUPPLIED FROM MBV]
IC0701	LA75503	IC	1	[SUPPLIED FROM MBV]
IC1001	PQ20VB2E	IC	1	[SUPPLIED FROM MBV]
IC1201	UPC1093J	IC	1	[SUPPLIED FROM MBV]
IC1501,02	RPI354N	IC	2	[SUPPLIED FROM MBV]
IC2501	NJM2904M	IC	1	
IC2502	AN3811NK	IC	1	[SUPPLIED FROM MBV]
IC3001	TDA9735HV3	IC	1	[SUPPLIED FROM MBV]
IC3501	AN3365SB	IC	1	[SUPPLIED FROM MBV]
IC4901	LA73020M-TLM	IC	1	[SUPPLIED FROM MBV]
IC6001	M37777VFGC	IC	1	[SUPPLIED FROM MBV]
IC7501	M35500AFP	IC	1	[SUPPLIED FROM MBV]
IC7502	S80743AL	IC	1	
IC7503	RN5VD28AA	IC	1	[SUPPLIED FROM MBV]
IC7504	PNA4611M02VT	IR RECEIVER UNIT	1	[SUPPLIED FROM MBV]
IC7701	M306H0SFP	IC	1	[SUPPLIED FROM MBV]
IC7702	M27C4001BDAA	IC	1	[SUPPLIED FROM MBV]
IC7801	M24C16-WBN6	IC	1	[SUPPLIED FROM MBV]
⚠IP1001,02	UNH000300A	IC PROTECTOR	2	
⚠IP1201,02	UNH000300A	IC PROTECTOR	2	
⚠IP7801	UNH000300A	IC PROTECTOR	1	
JK4903	VJS3634	21-PIN SCART JACK	1	[SUPPLIED FROM MBV]
K0703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K0707-09	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
K1001	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K2501	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3504	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3506-08	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	3	
K4004	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4007	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4011	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4901	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4905	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4910,11	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K4916	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4917,18	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
K6002	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K6006	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7503	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7603	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7702	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
K7703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7712	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
L0701	ELJNAR18JF	CHIP INDUCTOR	1	[SUPPLIED FROM MBV]
L0703	ELJNA2R2JF	CHIP INDUCTOR	1	
L0705	ELESE330KA	COIL 33UH	1	
L2502	VLQ0599J101	COIL 100UH	1	
L2503	VLQ0599J680	COIL 68UH	1	
L3001	VLQ0599J220	COIL 22UH	1	
L3003	VLQ0599J470	COIL 47UH	1	
L3004	VLQ0599J680	COIL 68UH	1	
L3005,06	VLQ0599J101	COIL 100UH	2	
L3007	VLQ0599J330	COIL 33UH	1	
L3008	VLQ0599J470	COIL 47UH	1	
L3009	VLQ0599J390	COIL 39UH	1	
L3010	VLQ0599J560	COIL 56UH	1	
L3501	VLQ0599J330	COIL 33UH	1	
L4001	ELELN153JA	INDUCTOR 15000UH	1	[SUPPLIED FROM MBV]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
L4007	VLQ0599J680	COIL 68UH	1	
L4901	VLQ0599JR22	COIL 0.22UH	1	[SUPPLIED FROM MBV]
L4902	VLQ0599J680	COIL 68UH	1	
L4904	VLQ0599J680	COIL 68UH	1	
L7601-04	VLQ0599J330	COIL 33UH	4	
L7701	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7703	VLQ0822J270	COIL 27UH	1	[SUPPLIED FROM MBV]
L7704	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7706	VLQ0822J100	COIL 10UH	1	[SUPPLIED FROM MBV]
L7712	VLQ0822J101	COIL 100UH	1	[SUPPLIED FROM MBV]
LB3001, 02	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
LB3503, 04	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
LB4904	VLP0147	COIL	1	
LB4907	VLP0147	COIL	1	
LB7801	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
P1001	VJS3917A016W	CONNECTOR (FEMALE) 16P	1	
P1501	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P2501	VJP3835A012	CONNECTOR (MALE) 12P	1	
P2502	VJS3537A009G	CONNECTOR (FEMALE) 9P	1	
P3502	VJS3537A005G	CONNECTOR (FEMALE) 5P	1	[SUPPLIED FROM MBV]
P4002	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P4003	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
PK0701	VJR0826E009W	CONNECTOR (MALE) 9P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PS7701	VJR0777B007W	CONNECTOR (MALE) 7P	1	
PS7703	VJR0777B013W	CONNECTOR (MALE) 13P	1	
Q0701, 02	2SD601A-S	TRANSISTOR	2	[SUPPLIED FROM MBV]
Q1001	2SD601A	TRANSISTOR	1	
Q1002	2SD602A	TRANSISTOR	1	
Q1003	2SD1996-S	TRANSISTOR	1	
Q1004	2SB710A	TRANSISTOR	1	
Q1005, 06	2SD1996-S	TRANSISTOR	2	
Q1007	2SD602A-R	TRANSISTOR	1	
Q1009	2SD1996-S	TRANSISTOR	1	
Q1201, 02	2SD1996-S	TRANSISTOR	2	
Q1501	PNB2301MBV	TRANSISTOR	1	
Q1502	PNB2301MAV	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q4001	2SD1149	TRANSISTOR	1	
Q4002	2SD601A	TRANSISTOR	1	
Q4006	2SB710-R	TRANSISTOR	1	
Q4007	2SD602A-R	TRANSISTOR	1	
Q4901	2SB709A	TRANSISTOR	1	
Q4903, 04	2SD601A	TRANSISTOR	2	
Q4905	2SD1328-S	TRANSISTOR	1	
Q7601	2SD601A	TRANSISTOR	1	
Q7703, 04	2SD1819A	TRANSISTOR	2	
Q7705	2SD601A	TRANSISTOR	1	
Q7706	2SB709A	TRANSISTOR	1	
Q7707	2SB1218A	TRANSISTOR	1	
Q7709	2SB1218A	TRANSISTOR	1	
Q7710-12	2SD601A	TRANSISTOR	3	
Q7719	2SD601A	TRANSISTOR	1	
Q7801	2SD1996-S	TRANSISTOR	1	
QR1001	MUN2112	TRANSISTOR-RESISTOR	1	
QR1002	MUN2211	TRANSISTOR-RESISTOR	1	
QR1003	MUN2212	TRANSISTOR-RESISTOR	1	
QR1005	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001	UN2217	TRANSISTOR-RESISTOR	1	
QR4002	MUN2113	TRANSISTOR-RESISTOR	1	
QR4004	MUN2212	TRANSISTOR-RESISTOR	1	
QR4006	MUN2111	TRANSISTOR-RESISTOR	1	
QR4903	MUN2212	TRANSISTOR-RESISTOR	1	
QR6002	MUN2211	TRANSISTOR-RESISTOR	1	
R0705	ERJ3GEYJ362	M. RESISTOR CH 1/16W 3.6K	1	
R0707	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R0708	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R0711	ERJ3GEYJ181	M. RESISTOR CH 1/16W 180	1	
R0715	ERJ3GEYJ223	M. RESISTOR CH 1/16W 22K	1	
R0717	ERJ3GEYG471	M. RESISTOR CH 1/16W 470	1	
R0719	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R0723, 24	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	2	
R0725	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R0726	ERJ3GEYJ683	M. RESISTOR CH 1/16W 68K	1	
R0727	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
R0729	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R0730	ERJ6GEYG103	M. RESISTOR CH 1/10W 10K	1	
R0733	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R0734	ERJ3GEYJ392	M. RESISTOR CH 1/16W 3.9K	1	
R0737	ERJ3GEYJ331	M. RESISTOR CH 1/16W 330	1	
R0739	ERJ3GEYG472	M. RESISTOR CH 1/16W 4.7K	1	
R0740	ERJ3GEYG271	M. RESISTOR CH 1/16W 270	1	
R0741	ERJ3GEYJ221	M. RESISTOR CH 1/16W 220	1	
R0742	ERJ8GEYJ151	M. RESISTOR CH 1/8W 150	1	
R0745	ERJ6GEYJ335	M. RESISTOR CH 1/10W 3.3M	1	
R0746	ERJ6GEYJ564	M. RESISTOR CH 1/10W 560K	1	
R1001, 02	ERJ6GMYJ333	M. RESISTOR CH 1/10W 33K	2	
R1003, 04	ERJ6GMYJ562	M. RESISTOR CH 1/10W 5.6K	2	
R1005	ERDS2TJ152	C. RESISTOR 1/4W 1.5K	1	
R1006	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R1008	ERDS2TJ822	C. RESISTOR 1/4W 8.2K	1	
R1009, 10	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	2	
R1011	ERJ6GMYG823	M. RESISTOR CH 1/10W 82K	1	
R1012	ERDS2TJ222	C. RESISTOR 1/4W 2.2K	1	
R1013	ERJ6GMYG153	M. RESISTOR CH 1/10W 15K	1	
R1014	ERJ6GMYG163	M. RESISTOR CH 1/10W 16K	1	
R1015	ERJ6GMYG123	M. RESISTOR CH 1/10W 12K	1	
R1016, 17	ERJ6GMYJ563	M. RESISTOR CH 1/10W 56K	2	
R1018, 19	ERJ6GMYJ683	M. RESISTOR CH 1/10W 68K	2	
R1022	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R1023	ERJ6GMYJ123	M. RESISTOR CH 1/10W 12K	1	
R1024	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	1	
R1026	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
R1027	ERDS2TJ123	C. RESISTOR 1/4W 12K	1	
R1201, 02	ERJ6GMYG272	M. RESISTOR CH 1/10W 2.7K	2	
R1203	ERJ6GMYJ623	M. RESISTOR CH 1/10W 6.2K	1	
R1204	ERDS2TJ102	C. RESISTOR 1/4W 1K	1	
R1501	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1	
R1502	ERDS2TJ181	C. RESISTOR 1/4W 180	1	
R1503	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1	
R1504	ERDS2TJ121	C. RESISTOR 1/4W 120	1	
R1505	ERJ6GMYJ393	M. RESISTOR CH 1/10W 39K	1	
R1506	ERJ6GMYJ273	M. RESISTOR CH 1/10W 27K	1	
R2501	ERDS2TJ331	C. RESISTOR 1/4W 330	1	
R2502	ERJ6GMYJ682	M. RESISTOR CH 1/10W 6.8K	1	
R2503	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2504	ERJ6GMYJ105	M. RESISTOR CH 1/10W 1M	1	
R2505	ERJ6GMYJ392	M. RESISTOR CH 1/10W 3.9K	1	
R2506, 07	ERJ6GMYJ223	M. RESISTOR CH 1/10W 22K	2	
R2508	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2510	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R2511	ERJ6GMYG433	M. RESISTOR CH 1/10W 43K	1	
R2513	ERJ6GMYJ274	M. RESISTOR CH 1/10W 270	1	
R2514	ERJ6GMYJ102	M. RESISTOR CH 1/10W 1K	1	
R2515, 16	ERJ6GMYJ103	M. RESISTOR CH 1/10W 10K	2	
R2517	ERDS1TJ1R2	C. RESISTOR 1/2W 1.2	1	
R2518	ERDS1TJ1R5	C. RESISTOR 1/2W 1.5	1	
R2519	ERDS2TJ330	C. RESISTOR 1/4W 33	1	
R2532	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R3001	ERJ6GMYJ183	M. RESISTOR CH 1/10W 18K	1	
R3002	ERJ6GMYG301	M. RESISTOR CH 1/10W 300	1	
R3004	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4.7K	1	
R3007	ERJ6GMYJ101	M. RESISTOR CH 1/10W 100	1	
R3008	ERJ6GMYJ152	M. RESISTOR CH 1/10W 1.5K	1	
R3009	ERJ6GMYJ101	M. RESISTOR CH 1/10W 100	1	
R3010	ERJ6GMYJ473	M. RESISTOR CH 1/10W 47K	1	
R3011, 12	ERJ6GMYJ101	M. RESISTOR CH 1/10W 100	2	
R3013	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
R3020	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
R3021	ERJ6GMYJ684	M. RESISTOR CH 1/10W 680K	1	
R3022	ERJ6GMYJ224	M. RESISTOR CH 1/10W 220K	1	
R3023	ERJ6GMYJ332	M. RESISTOR CH 1/10W 3.3K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R3024	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3025	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R3026	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3027	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3028	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3029	ERJ6GMYG331	M.RESISTOR CH 1/10W 330	1	
R3030	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R3031	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R3032	ER0S2CKG3300	M.RESISTOR 1/4W 330	1	
R3033	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3034	ERJ6GMYG182	M.RESISTOR CH 1/10W 1.8K	1	
R3036	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3040	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3505	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4001	ERJ6GMYG334	M.RESISTOR CH 1/10W 330K	1	
R4002	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4004	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4005	ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R4006	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4007	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4008	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4009	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R4011	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4012	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4014	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R4015	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4016	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4019	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4049	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4060	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4061	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4062	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4063	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4071	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4072	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R4073	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4504	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4506	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4901	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4903	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4907,08	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4909	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R4911	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4912	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4913	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4915	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4916	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4917	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4921,22	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4924,25	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4926,27	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R4928,29	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4930	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4931	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4932	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4933,34	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6001	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6002	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6006	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6008,09	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6010	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6011	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6012,13	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R6018	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6019	ERJ6GMYK106	M.RESISTOR CH 1/10W 10M	1	
R6020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6021	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R6022	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6031	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R6036,37	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6038	ERJ6GMYJ433	M.RESISTOR CH 1/10W 43K	1	
R6039	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6063	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7501	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7502,03	ERJ6GMYJ202	M.RESISTOR CH 1/10W 2K	2	
R7505	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7506-08	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7509	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7510	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7511	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7512	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7513	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7514	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7515	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7516	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7517	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7518,19	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R7520,21	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7522	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7523-25	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	3	
R7526	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7527	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7528	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7533	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	1	
R7540	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7549	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7601,02	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7603	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7606,07	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7608,09	ERDS2TJ331	C.RESISTOR 1/4W 330	2	
R7610	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7612	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7613	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7614	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7701	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7703	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7707	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7708-10	ERJ6GEYG511	M.RESISTOR CH 1/10W 510	3	
R7711,12	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7713	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7714	ERJ3GEYG153	M.RESISTOR CH 1/16W 15K	1	
R7715	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7716	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R7717	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7718,19	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R7721	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7722	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R7723	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R7724	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7727	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R7729	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R7730	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R7732	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7733	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7734	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7735	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7736	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7737	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7738	ERJ6GEYK225	M.RESISTOR CH 1/10W 2.2M	1	
R7739	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7754-56	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R7758,59	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7760	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7762	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7764	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7769,70	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R7775	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7780	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7784,85	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R7786	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7801	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7802	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7803	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7804,05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7815,16	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7848	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R7858	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R7863	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R7865	ERJ3GEYG152	M. RESISTOR CH 1/16W 1.5K	1	
R7866	ERJ6GEYG222	M. RESISTOR CH 1/10W 2.2K	1	
RX7702-05	VRE0219A101	NETWORK RESISTOR	4	[SUPPLIED FROM MBV]
RX7708, 09	VRE0219A101	NETWORK RESISTOR	2	[SUPPLIED FROM MBV]
S1501	VSS0520-3	MODE SELECT SWITCH	1	[SUPPLIED FROM MBV]
S6001	VES0834	S-TAB SWITCH	1	
S7503, 04	EVQ11L07B	SWITCH	2	
S7506, 07	EVQ11L07B	SWITCH	2	
S7509, 10	EVQ11L07B	SWITCH	2	
S7516	EVQ11L07B	SWITCH	1	
T0701	EQV5EC082P	TRANSFORMER	1	[SUPPLIED FROM MBV]
T4001	EQQ7QF024P	TRANSFORMER	1	
⚠TU7601	ENG47307G1	TUNER	1	[SUPPLIED FROM MBV]
VR0701	EVNCBAA00B14	V. RESISTOR	1	
X0701	VLF1416	FILTER	1	[SUPPLIED FROM MBV]
X0704	VLF1493	FILTER	1	[SUPPLIED FROM MBV]
X3001	VSX0162	CRYSTAL OSCILLATOR	1	
X6001	VSX0830	CRYSTAL OSCILLATOR	1	
X6002	VSX0660	CRYSTAL OSCILLATOR	1	
X7701	VSX1043	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4999	SHIELD CASE (MIDDLE)	1	[SUPPLIED FROM MBV]
	VSC4998	HA ANGLE	1	[SUPPLIED FROM MBV]
	VXQ0648	FIP HOLDER	1	
	VMP4894	SUPPORT ANGLE	1	FOR OSD C. B. A.
	VMP5897	CONNECTING ANGLE	1	FOR TV DEMODULATOR C. B. A.
■	VEP06D70M	MAIN C. B. A.		[SUPPLIED FROM MBV] (RTL) NV-SJ260EGYK
C0701	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C0702	ECUX1H102KBV	C. CAPACITOR CH 50V 1000P	1	
C0703	ECUM1A105KBN	C. CAPACITOR CH 10V 1U	1	
C0704	ECUM1E333KBN	C. CAPACITOR CH 25V 0.033U	1	
C0705	ECUX1H150JCV	C. CAPACITOR CH 50V 15P	1	
C0706	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C0707	ECEA1HKA2R2	E. CAPACITOR 50V 2.2U	1	
C0708	ECEA1HKAR47	E. CAPACITOR 50V 0.47U	1	
C0709	ECUX1H470JCV	C. CAPACITOR CH 50V 47P	1	
C0710	ECUX1H103ZFV	C. CAPACITOR CH 50V 0.01U	1	
C0711	ECEA1CKA220	E. CAPACITOR 16V 22U	1	
C0712	ECUX1C104ZFV	C. CAPACITOR CH 16V 0.1U	1	
C0713	EEUFA1A391	E. CAPACITOR 10V 390U	1	
C0714	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C0715	ECUX1H030CCV	C. CAPACITOR CH 50V 3P	1	
C0716	ECUM1H223KBV	C. CAPACITOR CH 50V 0.022U	1	[SUPPLIED FROM MBV]
C0717	ECUM1H330GUV	C. CAPACITOR CH 50V 33P	1	
C0718	ECEA1CKN100	E. CAPACITOR 16V 10U	1	
C0719	ECUX1E104ZFV	C. CAPACITOR CH 25V 0.1U	1	
C0721	ECUX1H181JCV	C. CAPACITOR CH 50V 180P	1	
C0722	ERJ3GEYJ123	M. RESISTOR CH 1/16W 12K	1	
C0724	ECUX1H221KBV	C. CAPACITOR CH 50V 220P	1	
C1001	ECEA1AKG220	E. CAPACITOR 10V 22U	1	
C1002	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1003	ECEA1CGE470	E. CAPACITOR 16V 47U	1	
C1004	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1005	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C1006, 07	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	2	
C1008	ECA1CAK470X	E. CAPACITOR 16V 47U	1	
C1009	ECEA1AKA470	E. CAPACITOR 10V 47U	1	
C1010	ECEA1VGE470	E. CAPACITOR 35V 47U	1	
C1011, 12	ECEA1CKA100	E. CAPACITOR 16V 10U	2	
C1201	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C1202	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C1203	ECEA1AKA220	E. CAPACITOR 10V 22U	1	
C1204	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1205	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C1206, 07	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C1208	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C1501	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C2501	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C2502	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2504	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C2505	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C2506	ECEA1HKNR47	E. CAPACITOR 50V 0.47U	1	
C2507-10	ECUM1H563ZFN	C. CAPACITOR CH 50V 0.056U	4	
C2511	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2512	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C2513	ECEA1EKS4R7	E. CAPACITOR 25V 4.7U	1	
C2514	ECEA1CKS100	E. CAPACITOR 16V 10U	1	
C2516	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C2517	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C2518	ECUM1H473ZFN	C. CAPACITOR CH 50V 0.047U	1	
C2519	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H392KBN	C. CAPACITOR CH 50V 3900P	1	
C2521	ECEA1EKA470	E. CAPACITOR 25V 47U	1	
C2522	ECUM1E683KBN	C. CAPACITOR CH 25V 0.068U	1	
C2523-25	ECUM1C154KBN	C. CAPACITOR CH 16V 0.15U	3	
C2526	ECEA1VKN4R7	E. CAPACITOR 35V 4.7U	1	
C2527	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C2535, 36	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C3002, 03	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	2	
C3004	ECEA1HKA3R3	E. CAPACITOR 50V 3.3U	1	
C3005	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C3007	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3008	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3011	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C3012, 13	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	2	
C3014	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3015	ECEA1HKA010	E. CAPACITOR 50V 1U	1	
C3016	ECUM1H333KBN	C. CAPACITOR CH 50V 0.033U	1	
C3017	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3018	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3019	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	1	
C3020	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C3021	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
C3024	ECEA0JKA470	E. CAPACITOR 6.3V 47U	1	
C3025	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3026	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3029	ECUM1H103ZFN	C. CAPACITOR CH 50V 0.01U	1	
C3030	ECUM1H222KBN	C. CAPACITOR CH 50V 2200P	1	
C3031	ECEA1HKAR47	E. CAPACITOR 50V 0.47U	1	
C3033, 34	ECEA1EKN4R7	E. CAPACITOR 25V 4.7U	2	
C3035	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3036	ECEA0JKA221	E. CAPACITOR 6.3V 220U	1	
C3037	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3038	ECEA0JKA101	E. CAPACITOR 6.3V 100U	1	
C3039	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3040	ECUM1H223KBN	C. CAPACITOR CH 50V 0.022U	1	
C3041	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C3042	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C3043	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3044	ECUM1H821JCN	C. CAPACITOR CH 50V 820P	1	
C3045	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C3046	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3047	ECEA0JKA220	E. CAPACITOR 6.3V 22U	1	
C3048	ECUM1H560JCN	C. CAPACITOR CH 50V 56P	1	
C3049	ECUM1H681JCN	C. CAPACITOR CH 50V 680P	1	
C3050	ECUM1H680JCN	C. CAPACITOR CH 50V 68P	1	
C3051	ECUM1H220JCN	C. CAPACITOR CH 50V 22P	1	
C3052	ECUM1H104ZFN	C. CAPACITOR CH 50V 0.1U	1	
C3054, 55	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C3504	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3505	ECEA0JKS470	E. CAPACITOR 6.3V 47U	1	
C3506	ECUM1H103KBN	C. CAPACITOR CH 50V 0.01U	1	
C3509, 10	ECUM1E104KBN	C. CAPACITOR CH 25V 0.1U	2	
C4001	ECEA1HKN010	E. CAPACITOR 50V 1U	1	
C4002	ECQB1H822JF	P. CAPACITOR 50V 8200P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4003	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4004	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C4006	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4007	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C4010	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	1	
C4012	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4013	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4014	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4015	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4016	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4018	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4019	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4068	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4070	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4072	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C4073	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4074	ECUM1H152JCN	C.CAPACITOR CH 50V 1500P	1	
C4075	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4901,02	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4904	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4905	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4907	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4908	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4912,13	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4917-19	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C4920	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4921	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4922	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4923,24	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4925	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4926	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4927	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4928	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4929,30	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4931	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4933	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4935	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4936	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4937	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4938	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4939	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4940	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4941	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6001	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6002	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6003	ECUM1H200JCN	C.CAPACITOR CH 50V 20P	1	
C6004	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C6005	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6007	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6011	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6012	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6013	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6018	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6019	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C6020	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6022	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6023	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6025	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7501	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7505	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7506	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7509	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514	VCE0073	SUPER CAPACITOR	1	
C7515	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7517,18	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7519	ECUM1H683ZFN	C.CAPACITOR CH 50V 0.068U	1	
C7520	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7601	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7602	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7603	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7605,06	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7607	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7608	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7609	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7610	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7611	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7612	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7614	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C7615	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C7618	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C7619	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7622	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7624,25	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7626	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7701	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7705	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7709	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7711	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7712,13	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7714	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7715	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7716	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7717	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7718	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7719	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7722,23	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C7724	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7725	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7726	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7728	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7729	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7730	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7731	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C7732,33	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C7734,35	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7736	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7739	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7745	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7749,50	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	2	
C7757	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7783	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7784	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7786	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7801	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7802	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C7803	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7804	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D0702	MA77	DIODE	1	
D1003	1SS254	DIODE	1	
D1004	MA4051N-H	DIODE	1	[SUPPLIED FROM MBV]
D1006	MA4130N-L	DIODE	1	[SUPPLIED FROM MBV]
D1009	MA4051N-M	DIODE	1	
D1010	1SS254	DIODE	1	
D1011,12	11ES1	DIODE	2	
D1015,16	1SS254	DIODE	2	
D1017	MA4120N-M	DIODE	1	
D1018	1SS254	DIODE	1	
D1501	SIR505S	DIODE	1	
D2502	1SS254	DIODE	1	
D2504,05	1SS254	DIODE	2	
D3001	1SS254	DIODE	1	
D4905,06	MA4075N-M	DIODE	2	[SUPPLIED FROM MBV]
D6004	RB441P	DIODE	1	
D7521	MA4220N-M	DIODE	1	[SUPPLIED FROM MBV]
D7601	MA4300M	DIODE	1	
D7603,04	1SS254	DIODE	2	
D7701	1SS355	DIODE	1	
D7801	MA4051N-M	DIODE	1	
D7802	1SS254	DIODE	1	
DP7501	VSL0533-B	FIP	1	[SUPPLIED FROM MBV]
IC0701	LA75503	IC	1	[SUPPLIED FROM MBV]
IC1001	PQ20VB2E	IC	1	[SUPPLIED FROM MBV]
IC1201	UPC1093J	IC	1	[SUPPLIED FROM MBV]
IC1501,02	RPI354N	IC	2	[SUPPLIED FROM MBV]
IC2501	NJM2904M	IC	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC2502	AN3811NK	IC	1	[SUPPLIED FROM MBV]
IC3001	TDA9735HV3	IC	1	[SUPPLIED FROM MBV]
IC3501	AN3365SB	IC	1	[SUPPLIED FROM MBV]
IC4901	LA73020M-TLM	IC	1	[SUPPLIED FROM MBV]
IC6001	M37777VFGC	IC	1	[SUPPLIED FROM MBV]
IC7501	M35500AFP	IC	1	[SUPPLIED FROM MBV]
IC7502	S80743AL	IC	1	
IC7503	RN5VD28AA	IC	1	[SUPPLIED FROM MBV]
IC7504	PNA4611M02VT	IR RECEIVER UNIT	1	[SUPPLIED FROM MBV]
IC7701	M306H0SFP	IC	1	[SUPPLIED FROM MBV]
IC7702	M27C4001BDAA	IC	1	[SUPPLIED FROM MBV]
IC7801	M24C16-WBN6	IC	1	[SUPPLIED FROM MBV]
⚠ IP1001, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP1201, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP7801	UNH000300A	IC PROTECTOR	1	
JK4903	VJS3634	21-PIN SCART JACK	1	[SUPPLIED FROM MBV]
K0703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K0707-09	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
K1001	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K2501	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3504	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3506-08	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	3	
K4004	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4007	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4011	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4901	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4905	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4910, 11	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K4916	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4917, 18	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	2	
K6002	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K6006	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7503	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7603	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7702	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
K7703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7712	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
L0701	ELJNAR18JF	CHIP INDUCTOR	1	[SUPPLIED FROM MBV]
L0703	ELJNA2R2JF	CHIP INDUCTOR	1	
L0705	ELESE330KA	COIL 33UH	1	
L2502	VLQ0599J101	COIL 100UH	1	
L2503	VLQ0599J680	COIL 68UH	1	
L3001	VLQ0599J220	COIL 22UH	1	
L3003	VLQ0599J470	COIL 47UH	1	
L3004	VLQ0599J680	COIL 68UH	1	
L3005, 06	VLQ0599J101	COIL 100UH	2	
L3007	VLQ0599J330	COIL 33UH	1	
L3008	VLQ0599J470	COIL 47UH	1	
L3009	VLQ0599J390	COIL 39UH	1	
L3010	VLQ0599J560	COIL 56UH	1	
L3501	VLQ0599J330	COIL 33UH	1	
L4001	ELELN153JA	INDUCTOR 15000UH	1	[SUPPLIED FROM MBV]
L4007	VLQ0599J680	COIL 68UH	1	
L4901	VLQ0599JR22	COIL 0.22UH	1	[SUPPLIED FROM MBV]
L4902	VLQ0599J680	COIL 68UH	1	
L4904	VLQ0599J680	COIL 68UH	1	
L7601-04	VLQ0599J330	COIL 33UH	4	
L7701	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7703	VLQ0822J270	COIL 27UH	1	[SUPPLIED FROM MBV]
L7704	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7706	VLQ0822J100	COIL 10UH	1	[SUPPLIED FROM MBV]
L7712	VLQ0822J101	COIL 100UH	1	[SUPPLIED FROM MBV]
LB3001, 02	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
LB3503, 04	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
LB4904	VLP0147	COIL	1	
LB4907	VLP0147	COIL	1	
LB7801	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
P1001	VJS3917A016W	CONNECTOR (FEMALE) 16P	1	
P1501	VJS3837A002	CONNECTOR (FEMALE) 2P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
P2501	VJP3835A012	CONNECTOR (MALE) 12P	1	
P2502	VJS3537A009G	CONNECTOR (FEMALE) 9P	1	
P3502	VJS3537A005G	CONNECTOR (FEMALE) 5P	1	[SUPPLIED FROM MBV]
P4002	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P4003	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
PK0701	VJR0826E009W	CONNECTOR (MALE) 9P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PS7701	VJR0777B007W	CONNECTOR (MALE) 7P	1	
PS7703	VJR0777B013W	CONNECTOR (MALE) 13P	1	
Q0701, 02	2SD601A-S	TRANSISTOR	2	[SUPPLIED FROM MBV]
Q1001	2SD601A	TRANSISTOR	1	
Q1002	2SD602A	TRANSISTOR	1	
Q1003	2SD1996-S	TRANSISTOR	1	
Q1004	2SB710A	TRANSISTOR	1	
Q1005, 06	2SD1996-S	TRANSISTOR	2	
Q1007	2SD602A-R	TRANSISTOR	1	
Q1009	2SD1996-S	TRANSISTOR	1	
Q1201, 02	2SD1996-S	TRANSISTOR	2	
Q1501	PNB2301MBV	TRANSISTOR	1	
Q1502	PNB2301MAV	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q4001	2SD1149	TRANSISTOR	1	
Q4002	2SD601A	TRANSISTOR	1	
Q4006	2SB710-R	TRANSISTOR	1	
Q4007	2SD602A-R	TRANSISTOR	1	
Q4901	2SB709A	TRANSISTOR	1	
Q4903, 04	2SD601A	TRANSISTOR	2	
Q4905	2SD1328-S	TRANSISTOR	1	
Q7601	2SD601A	TRANSISTOR	1	
Q7703, 04	2SD1819A	TRANSISTOR	2	
Q7705	2SD601A	TRANSISTOR	1	
Q7706	2SB709A	TRANSISTOR	1	
Q7707	2SB1218A	TRANSISTOR	1	
Q7709	2SB1218A	TRANSISTOR	1	
Q7710-12	2SD601A	TRANSISTOR	3	
Q7719	2SD601A	TRANSISTOR	1	
Q7801	2SD1996-S	TRANSISTOR	1	
QR1001	MUN2112	TRANSISTOR-RESISTOR	1	
QR1002	MUN2211	TRANSISTOR-RESISTOR	1	
QR1003	MUN2212	TRANSISTOR-RESISTOR	1	
QR1005	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001	UN2217	TRANSISTOR-RESISTOR	1	
QR4002	MUN2113	TRANSISTOR-RESISTOR	1	
QR4004	MUN2212	TRANSISTOR-RESISTOR	1	
QR4006	MUN2111	TRANSISTOR-RESISTOR	1	
QR4903	MUN2212	TRANSISTOR-RESISTOR	1	
QR6002	MUN2211	TRANSISTOR-RESISTOR	1	
R0705	ERJ3GEYJ362	M.RESISTOR CH 1/16W 3.6K	1	
R0707	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R0708	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0711	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R0715	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R0717	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R0719	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R0723, 24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R0725	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R0726	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R0727	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R0729	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0730	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R0733	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0734	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R0737	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R0739	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R0740	ERJ3GEYG271	M.RESISTOR CH 1/16W 270	1	[SUPPLIED FROM MBV
R0741	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0742	ERJ8GEYJ151	M.RESISTOR CH 1/8W 150	1	
R0745	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R0746	ERJ6GEYJ564	M.RESISTOR CH 1/10W 560K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R1001,02	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R1003,04	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R1005	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R1006	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1008	ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R1009,10	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R1011	ERJ6GMYG823	M.RESISTOR CH 1/10W 82K	1	
R1012	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R1013	ERJ6GMYG153	M.RESISTOR CH 1/10W 15K	1	
R1014	ERJ6GMYG163	M.RESISTOR CH 1/10W 16K	1	
R1015	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R1016,17	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	2	
R1018,19	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R1022	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1023	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R1024	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1026	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R1027	ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R1201,02	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	2	
R1203	ERJ6GMYJ623	M.RESISTOR CH 1/10W 6.2K	1	
R1204	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1501	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1502	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R1503	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1504	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R1505	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R1506	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2501	ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R2502	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2503	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2504	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2505	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2506,07	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2508	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2510	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2511	ERJ6GMYG433	M.RESISTOR CH 1/10W 43K	1	
R2513	ERJ6GMYJ274	M.RESISTOR CH 1/10W 270	1	
R2514	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2515,16	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2517	ERDS1TJ1R2	C.RESISTOR 1/2W 1.2	1	
R2518	ERDS1TJ1R5	C.RESISTOR 1/2W 1.5	1	
R2519	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2532	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3001	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R3002	ERJ6GMYG301	M.RESISTOR CH 1/10W 300	1	
R3004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3007	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3008	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3009	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3010	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3011,12	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R3013	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3020	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3021	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R3022	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R3023	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3024	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3025	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R3026	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3027	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3028	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3029	ERJ6GMYG331	M.RESISTOR CH 1/10W 330	1	
R3030	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R3031	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R3032	ER0S2CKG3300	M.RESISTOR 1/4W 330	1	
R3033	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3034	ERJ6GMYG182	M.RESISTOR CH 1/10W 1.8K	1	
R3036	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3040	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3505	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4001	ERJ6GMYG334	M.RESISTOR CH 1/10W 330K	1	
R4002	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4004	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4005	ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R4006	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4007	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4008	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4009	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R4011	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4012	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4014	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R4015	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4016	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4019	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4049	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4060	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4061	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4062	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4063	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4071	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4072	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R4073	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4504	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4506	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4901	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4903	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4907,08	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4909	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R4911	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4912	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4913	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4915	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4916	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4917	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4921,22	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4924,25	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4926,27	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R4928,29	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4930	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4931	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4932	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4933,34	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6001	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6002	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6006	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6008,09	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6010	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6011	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6012,13	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R6018	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6019	ERJ6GMYK106	M.RESISTOR CH 1/10W 10M	1	
R6020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6021	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R6022	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6031	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R6036,37	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6038	ERJ6GMYJ433	M.RESISTOR CH 1/10W 43K	1	
R6039	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R6063	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7501	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7502,03	ERJ6GMYJ202	M.RESISTOR CH 1/10W 2K	2	
R7505	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7506-08	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7509	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7510	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7511	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7512	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7513	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7514	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7515	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7516	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7517	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7518,19	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R7520,21	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7522	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7523-25	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	3	
R7526	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7527	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7528	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7533	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	1	
R7540	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7549	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7601, 02	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7603	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7606, 07	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7608, 09	ERDS2TJ331	C.RESISTOR 1/4W 330	2	
R7610	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7612	ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7613	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7614	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7701	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7703	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7707	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7708-10	ERJ6GEYG511	M.RESISTOR CH 1/10W 510	3	
R7711, 12	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7713	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7714	ERJ3GEYG153	M.RESISTOR CH 1/16W 15K	1	
R7715	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7716	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R7717	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7718, 19	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R7721	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R7722	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R7723	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R7724	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7727	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R7729	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R7730	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R7732	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7733	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7734	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7735	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7736	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7737	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7738	ERJ6GEYK225	M.RESISTOR CH 1/10W 2.2M	1	
R7739	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7754-56	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R7758, 59	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7760	ERJ6GEYOR00	M.RESISTOR CH 1/10W 0	1	
R7762	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7764	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7769, 70	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R7775	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7780	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7784, 85	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R7786	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7801	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7802	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7803	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7804, 05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7815, 16	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7848	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R7858	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7863	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7865	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7866	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
RX7702-05	VRE0219A101	NETWORK RESISTOR	4	[SUPPLIED FROM MBV]
RX7708, 09	VRE0219A101	NETWORK RESISTOR	2	[SUPPLIED FROM MBV]
S1501	VSS0520-3	MODE SELECT SWITCH	1	[SUPPLIED FROM MBV]
S6001	VES0834	S-TAB SWITCH	1	
S7503, 04	EVQ11L07B	SWITCH	2	
S7506, 07	EVQ11L07B	SWITCH	2	
S7509, 10	EVQ11L07B	SWITCH	2	
S7516	EVQ11L07B	SWITCH	1	
T0701	EQV5EC082P	TRANSFORMER	1	[SUPPLIED FROM MBV]
T4001	EQQ7QF024P	TRANSFORMER	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠TU7601	ENG47306G1	TUNER	1	[SUPPLIED FROM MBV]
VR0701	EVNCBAA00B14	V.RESISTOR	1	
X0701	VLF1416	FILTER	1	[SUPPLIED FROM MBV]
X0704	VLF1493	FILTER	1	[SUPPLIED FROM MBV]
X3001	VSX0162	CRYSTAL OSCILLATOR	1	
X6001	VSX0830	CRYSTAL OSCILLATOR	1	
X6002	VSX0660	CRYSTAL OSCILLATOR	1	
X7701	VSX1043	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4999	SHIELD CASE (MIDDLE)	1	[SUPPLIED FROM MBV]
	VSC4998	HA ANGLE	1	[SUPPLIED FROM MBV]
	VXQ0648	FIP HOLDER	1	
	VMP4894	SUPPORT ANGLE	1	FOR OSD C.B.A.
	VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMODULATOR C.B.A.
■	VEP06D26T	MAIN C.B.A.		[SUPPLIED FROM MBV] (RTL) NV-SJ410EG-S/EGMS
C0701	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0702	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C0703	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C0704	ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C0705	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C0706	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C0707	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C0708	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C0709	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C0710	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0711	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C0712	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C0713	EEUFA1A391	E.CAPACITOR 10V 390U	1	
C0714	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0715	ECUX1H030CCV	C.CAPACITOR CH 50V 3P	1	
C0716	ECUM1H223KBV	C.CAPACITOR CH 50V 0.022U	1	[SUPPLIED FROM MBV]
C0717	ECUM1H330GUV	C.CAPACITOR CH 50V 33P	1	
C0718	ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C0719	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C0721	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C0722	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
C0724	ECUX1H221KBV	C.CAPACITOR CH 50V 220P	1	
C1001	ECEA1AKG220	E.CAPACITOR 10V 22U	1	
C1002	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1003	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1004	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1005	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1006, 07	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1008	ECA1CAK470X	E.CAPACITOR 16V 47U	1	
C1009	ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C1010	ECEA1VGE470	E.CAPACITOR 35V 47U	1	
C1011, 12	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C1201	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1202	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1203	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C1204	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1205	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1206, 07	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C1208	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1501	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2501	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C2502	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2504	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2505	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2506	ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C2507-10	ECUM1H563ZFN	C.CAPACITOR CH 50V 0.056U	4	
C2511	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2512	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2513	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	1	
C2514	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C2516	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2517	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2518	ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C2519	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2521	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2522	ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C2523-25	ECUM1C154KBN	C.CAPACITOR CH 16V 0.15U	3	
C2526	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2527	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C2535, 36	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3002, 03	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C3004	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C3005	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3007	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3011	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3012, 13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3015	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3016	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C3017	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3018	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3019	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3020	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3021	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C3024	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C3025	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3030	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3031	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C3033, 34	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	2	
C3035	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3036	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3037	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3038	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3039	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3040	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C3041	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3042	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3043	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3044	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C3045	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3046	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3047	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3048	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3049	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3050	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3051	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3052	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3054, 55	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3502	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3504	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3505	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3506	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3507-10	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C4001	ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C4002	ECQB1H822JF	P.CAPACITOR 50V 8200P	1	
C4003	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4004	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C4005	ECUM1H272KBN	C.CAPACITOR CH 50V 2700P	1	
C4006	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4007	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C4010, 11	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	2	
C4012	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4013	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4014	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4015	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4016	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4017	ECUM1H222JN	C.CAPACITOR CH 50V 2200P	1	
C4018	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4019	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4020	ECUM1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C4021	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C4068	ECQV1H154JM	P.CAPACITOR 50V 0.15U	1	
C4070	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4071	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4072	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C4073	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4074	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4075	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4076	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4077	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4078	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4079	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4080	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4901, 02	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4904	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4905	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4907	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4908	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4912, 13	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4917-19	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C4920	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4921	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4922	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4923, 24	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4925	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4926	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4927	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4928	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4929, 30	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4931	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4933	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4935	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4936	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4937	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4938	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4939	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4940	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4941	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6001	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6002	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6003	ECUM1H200JCN	C.CAPACITOR CH 50V 20P	1	
C6004	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C6005	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6007	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6011	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6012	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6013	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6018	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6019	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6020	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6021	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C6022	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6023	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6024	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6025	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7501	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7505	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7506	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7509	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514	VCE0073	SUPER CAPACITOR	1	
C7515	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7517, 18	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7519	ECUM1H683ZFN	C.CAPACITOR CH 50V 0.068U	1	
C7520	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7601	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7602	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7603	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7605, 06	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7607	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7608	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7609	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7610	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7611	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7612	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7614	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C7615	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7618	ECUM1E104KBN	C. CAPACITOR CH 25V 0. 1U	1	
C7619	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7622	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C7624, 25	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C7626	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7701	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7705	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7709	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C7711	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7712, 13	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C7714	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C7715	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7716	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C7717	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7718	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C7719	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7722, 23	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	2	
C7724	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C7725	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7726	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	1	
C7728	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C7729	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7730	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7731	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C7732, 33	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C7734, 35	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	2	
C7736	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7739	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7745	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7749, 50	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	2	
C7757	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7783	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7784	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7786	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7801	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C7802	ECEA0JKA220	E. CAPACITOR 6. 3V 22U	1	
C7803	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C7804	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
D0702	MA77	DIODE	1	
D1003	1SS254	DIODE	1	
D1004	MA4051N-H	DIODE	1	[SUPPLIED FROM MBV]
D1006	MA4130N-L	DIODE	1	[SUPPLIED FROM MBV]
D1009	MA4051N-M	DIODE	1	
D1010	1SS254	DIODE	1	
D1011, 12	11ES1	DIODE	2	
D1015, 16	1SS254	DIODE	2	
D1017	MA4120N-M	DIODE	1	
D1018	1SS254	DIODE	1	
D1501	SIR505S	DIODE	1	
D2502	1SS254	DIODE	1	
D2504, 05	1SS254	DIODE	2	
D3001	1SS254	DIODE	1	
D4001	1SS254	DIODE	1	
D4905, 06	MA4075N-M	DIODE	2	[SUPPLIED FROM MBV]
D6001	MA700	DIODE	1	
D6003	MA700	DIODE	1	
D6004	RB441P	DIODE	1	
D7521	MA4220N-M	DIODE	1	[SUPPLIED FROM MBV]
D7601	MA4300M	DIODE	1	
D7603, 04	1SS254	DIODE	2	
D7701	1SS355	DIODE	1	
D7801	MA4051N-M	DIODE	1	
D7802	1SS254	DIODE	1	
DP7501	VSL0533-B	FIP	1	[SUPPLIED FROM MBV]
IC0701	LA75503	IC	1	[SUPPLIED FROM MBV]
IC1001	PQ20VB2E	IC	1	[SUPPLIED FROM MBV]
IC1201	UPC1093J	IC	1	[SUPPLIED FROM MBV]
IC1501, 02	RPI354N	IC	2	[SUPPLIED FROM MBV]
IC2501	NJM2904M	IC	1	
IC2502	AN3811NK	IC	1	[SUPPLIED FROM MBV]
IC3001	TDA9735HV3	IC	1	[SUPPLIED FROM MBV]
IC3501	AN3368SB	IC	1	[SUPPLIED FROM MBV]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
IC4901	LA73020M-TLM	IC	1	[SUPPLIED FROM MBV]
IC6001	M37777VFGC	IC	1	[SUPPLIED FROM MBV]
IC7501	M35500AFP	IC	1	[SUPPLIED FROM MBV]
IC7502	S80743AL	IC	1	
IC7503	RN5VD28AA	IC	1	[SUPPLIED FROM MBV]
IC7504	PNA4611M02VT	IR RECEIVER UNIT	1	[SUPPLIED FROM MBV]
IC7701	M306H0SFP	IC	1	[SUPPLIED FROM MBV]
IC7702	M27C4001BDAA	IC	1	[SUPPLIED FROM MBV]
IC7801	M24C16-WBN6	IC	1	[SUPPLIED FROM MBV]
⚠ IP1001, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP1201, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP7801	UNH000300A	IC PROTECTOR	1	
JK4903	VJS3634	21-PIN SCART JACK	1	[SUPPLIED FROM MBV]
K0703	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
K0707-09	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	3	
K1001	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K2501	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K3002	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K3506-08	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	3	
K4005, 06	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K4011	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4901	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4905	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4910, 11	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K4916	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K6001	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K6006, 07	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K7503	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K7603	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K7702	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
K7703	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
K7712	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
L0701	ELJNAR18JF	CHIP INDUCTOR	1	[SUPPLIED FROM MBV]
L0703	ELJNA2R2JF	CHIP INDUCTOR	1	
L0705	ELESE330KA	COIL 33UH	1	
L2502	VLQ0599J101	COIL 100UH	1	
L2503	VLQ0599J680	COIL 68UH	1	
L3001	VLQ0599J220	COIL 22UH	1	
L3003	VLQ0599J470	COIL 47UH	1	
L3004	VLQ0599J680	COIL 68UH	1	
L3005, 06	VLQ0599J101	COIL 100UH	2	
L3007	VLQ0599J330	COIL 33UH	1	
L3008	VLQ0599J470	COIL 47UH	1	
L3009	VLQ0599J390	COIL 39UH	1	
L3010	VLQ0599J560	COIL 56UH	1	
L3501	VLQ0599J330	COIL 33UH	1	
L4001	ELELN153JA	INDUCTOR 15000UH	1	[SUPPLIED FROM MBV]
L4006, 07	VLQ0599J680	COIL 68UH	2	
L4901	VLQ0599JR22	COIL 0. 22UH	1	[SUPPLIED FROM MBV]
L4902	VLQ0599J680	COIL 68UH	1	
L4904	VLQ0599J680	COIL 68UH	1	
L6001	VLQ0599J221	COIL 220UH	1	
L7601-04	VLQ0599J330	COIL 33UH	4	
L7701	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7703	VLQ0822J270	COIL 27UH	1	[SUPPLIED FROM MBV]
L7704	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7706	VLQ0822J100	COIL 10UH	1	[SUPPLIED FROM MBV]
L7712	VLQ0822J101	COIL 100UH	1	[SUPPLIED FROM MBV]
LB3001, 02	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
LB3501-04	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	4	
LB4904	VLP0147	COIL	1	
LB4907	VLP0147	COIL	1	
LB7801	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
P1001	VJS3917A016W	CONNECTOR (FEMALE) 16P	1	
P1501	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P2501	VJP3835A012	CONNECTOR (MALE) 12P	1	
P2502	VJS3537A009G	CONNECTOR (FEMALE) 9P	1	
P3502	VJS3537A010G	CONNECTOR (FEMALE) 10P	1	
P4002	VJS3837A002	CONNECTOR (FEMALE) 2P	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
P4003	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
P7502	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
PK0701	VJR0826E009W	CONNECTOR (MALE) 9P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PS7701	VJR0777B007W	CONNECTOR (MALE) 7P	1	
PS7703	VJR0777B014W	CONNECTOR (MALE) 14P	1	
Q0701,02	2SD601A-S	TRANSISTOR	2	[SUPPLIED FROM MBV]
Q1001	2SD601A	TRANSISTOR	1	
Q1002	2SD602A	TRANSISTOR	1	
Q1003	2SD1996-S	TRANSISTOR	1	
Q1004	2SB710A	TRANSISTOR	1	
Q1005,06	2SD1996-S	TRANSISTOR	2	
Q1007	2SD602A-R	TRANSISTOR	1	
Q1009	2SD1996-S	TRANSISTOR	1	
Q1201,02	2SD1996-S	TRANSISTOR	2	
Q1501	PNB2301MBV	TRANSISTOR	1	
Q1502	PNB2301MAV	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q4001	2SD1149	TRANSISTOR	1	
Q4002	2SD601A	TRANSISTOR	1	
Q4004	2SB710-R	TRANSISTOR	1	
Q4005	2SD602A-R	TRANSISTOR	1	
Q4006	2SB710-R	TRANSISTOR	1	
Q4007	2SD602A-R	TRANSISTOR	1	
Q4901	2SB709A	TRANSISTOR	1	
Q4903,04	2SD601A	TRANSISTOR	2	
Q4905	2SD1328-S	TRANSISTOR	1	
Q7501	2SB709A	TRANSISTOR	1	
Q7502	2SD1994	TRANSISTOR	1	
Q7601	2SD601A	TRANSISTOR	1	
Q7703,04	2SD1819A	TRANSISTOR	2	
Q7705	2SD601A	TRANSISTOR	1	
Q7706	2SB709A	TRANSISTOR	1	
Q7707	2SB1218A	TRANSISTOR	1	
Q7709	2SB1218A	TRANSISTOR	1	
Q7710-12	2SD601A	TRANSISTOR	3	
Q7719	2SD601A	TRANSISTOR	1	
Q7801	2SD1996-S	TRANSISTOR	1	
QR1001	MUN2112	TRANSISTOR-RESISTOR	1	
QR1002	MUN2211	TRANSISTOR-RESISTOR	1	
QR1003	MUN2212	TRANSISTOR-RESISTOR	1	
QR1005	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001	UN2217	TRANSISTOR-RESISTOR	1	
QR4002	MUN2113	TRANSISTOR-RESISTOR	1	
QR4003,04	MUN2212	TRANSISTOR-RESISTOR	2	
QR4006	MUN2111	TRANSISTOR-RESISTOR	1	
QR4007	MUN2212	TRANSISTOR-RESISTOR	1	
QR4008	MUN2211	TRANSISTOR-RESISTOR	1	
QR4009,10	UN2215	TRANSISTOR	2	
QR4903	MUN2212	TRANSISTOR-RESISTOR	1	
QR6002	MUN2211	TRANSISTOR-RESISTOR	1	
QR6004	MUN2212	TRANSISTOR-RESISTOR	1	
R0705	ERJ3GEYJ362	M.RESISTOR CH 1/16W 3.6K	1	
R0707	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R0708	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0711	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R0715	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R0717	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R0719	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R0723,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R0725	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R0726	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R0727	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R0729	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0730	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R0733	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0734	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R0737	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R0739	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R0740	ERJ3GEYG271	M.RESISTOR CH 1/16W 270	1	[SUPPLIED FROM MBV]
R0741	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0742	ERJ8GEYJ151	M.RESISTOR CH 1/8W 150	1	
R0745	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R0746	ERJ6GEYJ564	M.RESISTOR CH 1/10W 560K	1	
R1001,02	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R1003,04	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R1005	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R1006	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1008	ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R1009,10	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R1011	ERJ6GMYG823	M.RESISTOR CH 1/10W 82K	1	
R1012	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R1013	ERJ6GMYG153	M.RESISTOR CH 1/10W 15K	1	
R1014	ERJ6GMYG163	M.RESISTOR CH 1/10W 16K	1	
R1015	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R1016,17	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	2	
R1018,19	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R1022	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1023	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R1024	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1026	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R1027	ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R1201,02	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	2	
R1203	ERJ6GMYJ623	M.RESISTOR CH 1/10W 6.2K	1	
R1204	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1501	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1502	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R1503	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1504	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R1505	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R1506	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2501	ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R2502	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2503	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2504	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2505	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2506,07	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2508	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2510	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2511	ERJ6GMYG433	M.RESISTOR CH 1/10W 43K	1	
R2513	ERJ6GMYJ274	M.RESISTOR CH 1/10W 270	1	
R2514	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2515,16	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2517	ERDS1TJ1R2	C.RESISTOR 1/2W 1.2	1	
R2518	ERDS1TJ1R5	C.RESISTOR 1/2W 1.5	1	
R2519	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2532	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3001	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R3002	ERJ6GMYG301	M.RESISTOR CH 1/10W 300	1	
R3004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3007	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3008	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3009	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3010	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3011,12	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R3013	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3020	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3021	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R3022	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R3023	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3024	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3025	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R3026	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3027	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3028	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3029	ERJ6GMYG331	M.RESISTOR CH 1/10W 330	1	
R3030	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R3031	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R3032	EROS2CKG3300	M.RESISTOR 1/4W 330	1	
R3033	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3034	ERJ6GMYG681	M.RESISTOR CH 1/10W 680	1	
R3036	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3040	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3505	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R4001	ERJ6GMYG334	M.RESISTOR CH 1/10W 330K	1	
R4002	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4003	ERJ6GMYJ753	M.RESISTOR CH 1/10W 75K	1	
R4004	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4005	ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R4006	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4007	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4008	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4009	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R4010	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R4011	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4012	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4014	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R4015	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4016	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4018	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4019	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4049	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4060	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4061	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4062	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4063	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4064	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4065	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4066	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4071	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4072	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R4073	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4504	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4506	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4901	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4903	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4907, 08	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4909	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R4911	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4912	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4913	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4915	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4916	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4917	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4921, 22	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4924, 25	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4926, 27	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R4928, 29	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4930	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4931	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4932	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4933, 34	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6001	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6002	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6006	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6008, 09	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6010	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6012, 13	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R6018	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6019	ERJ6GMYK106	M.RESISTOR CH 1/10W 10M	1	
R6020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6021	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R6022	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6031	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R6035	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6036, 37	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6038	ERJ6GMYJ433	M.RESISTOR CH 1/10W 43K	1	
R6039	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R6063	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7501	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7502, 03	ERJ6GMYJ202	M.RESISTOR CH 1/10W 2K	2	
R7504	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7505	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7506-08	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7509	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7510	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7511	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7512	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7513	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7514	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7515	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7516	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7517	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7518, 19	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R7520, 21	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7522	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7523-25	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	3	
R7526	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7527	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7528	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7529	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R7530	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7531, 32	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7533	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	1	
R7535	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R7536	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7540	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7549	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7601, 02	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7603	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7606, 07	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7608, 09	ERDS2TJ331	C.RESISTOR 1/4W 330	2	
R7610	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7612	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7613	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7614	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7701	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7703	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7707	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7708-10	ERJ6GEYG511	M.RESISTOR CH 1/10W 510	3	
R7711, 12	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7713	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7714	ERJ3GEYG153	M.RESISTOR CH 1/16W 15K	1	
R7715	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7716	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R7717	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7718, 19	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R7721	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7722	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R7723	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R7724	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7727	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R7729	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R7730	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R7732	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7733	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7734	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7735	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7736	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7737	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7738	ERJ6GEYK225	M.RESISTOR CH 1/10W 2.2M	1	
R7739	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7754-56	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R7758, 59	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7760	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7762	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7764	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7769, 70	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R7775	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7776	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7780	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7784, 85	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R7786	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7801	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7802	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7803	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7804, 05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7815, 16	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R7848	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R7858	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7863	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7865	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7866	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
RX7702-05	VRE0219A101	NETWORK RESISTOR	4	[SUPPLIED FROM MBV]
RX7708,09	VRE0219A101	NETWORK RESISTOR	2	[SUPPLIED FROM MBV]
S1501	VSS0520-3	MODE SELECT SWITCH	1	[SUPPLIED FROM MBV]
S6001	VES0834	S-TAB SWITCH	1	
S7503,04	EVQ11L07B	SWITCH	2	
S7506,07	EVQ11L07B	SWITCH	2	
S7509,10	EVQ11L07B	SWITCH	2	
S7516,17	EVQ11L07B	SWITCH	2	
T0701	EQV5EC082P	TRANSFORMER	1	[SUPPLIED FROM MBV]
T4001	EQQ7QF026P	TRANSFORMER	1	
T4002	EQQ7QF025P	TRANSFORMER	1	
TH7501	VRT0162M220	THERMISTOR	1	
⚠TU7601	ENG47307G1	TUNER	1	[SUPPLIED FROM MBV]
VR0701	EVNCBAA00B14	V.RESISTOR	1	
X0701	VLF1416	FILTER	1	[SUPPLIED FROM MBV]
X0704	VLF1493	FILTER	1	[SUPPLIED FROM MBV]
X3001	VSX0162	CRYSTAL OSCILLATOR	1	
X6001	VSX0830	CRYSTAL OSCILLATOR	1	
X6002	VSX0660	CRYSTAL OSCILLATOR	1	
X7701	VSX1043	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4998	HA ANGLE	1	[SUPPLIED FROM MBV]
	VSC4999	SHIELD CASE (MIDDLE)	1	[SUPPLIED FROM MBV]
	VXQ0648	FIP HOLDER	1	
	VMP4894	SUPPORT ANGLE	1	FOR OSD C.B.A.
	VMP5897	CONNECTING ANGLE	1	FOR TV DEMODULATOR C.B.A.
■	VEP06D70K	MAIN C.B.A.		[SUPPLIED FROM MBV]
				(RTL) NV-SJ410EGYS
C0701	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0702	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C0703	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C0704	ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C0705	ECUX1H150JCV	C.CAPACITOR CH 50V 15P	1	
C0706	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C0707	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C0708	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C0709	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C0710	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	
C0711	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C0712	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C0713	EEUFA1A391	E.CAPACITOR 10V 390U	1	
C0714	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0715	ECUX1H030CCV	C.CAPACITOR CH 50V 3P	1	
C0716	ECUM1H223KBV	C.CAPACITOR CH 50V 0.022U	1	[SUPPLIED FROM MBV]
C0717	ECUM1H330GUV	C.CAPACITOR CH 50V 33P	1	
C0718	ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C0719	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C0721	ECUX1H181JCV	C.CAPACITOR CH 50V 180P	1	
C0722	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
C0724	ECUX1H221KBV	C.CAPACITOR CH 50V 220P	1	
C1001	ECEA1AKG220	E.CAPACITOR 10V 22U	1	
C1002	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1003	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1004	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1005	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1006,07	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1008	ECA1CAK470X	E.CAPACITOR 16V 47U	1	
C1009	ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C1010	ECEA1VGE470	E.CAPACITOR 35V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C1011,12	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C1201	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1202	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1203	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C1204	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1205	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1206,07	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C1208	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1501	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2501	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C2502	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2504	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2505	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2506	ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C2507-10	ECUM1H563ZFN	C.CAPACITOR CH 50V 0.056U	4	
C2511	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2512	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2513	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	1	
C2514	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C2516	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2517	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2518	ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2519	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2521	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2522	ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C2523-25	ECUM1C154KBN	C.CAPACITOR CH 16V 0.15U	3	
C2526	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2527	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C2535,36	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3002,03	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C3004	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C3005	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3007	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3011	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3012,13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3015	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3016	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C3017	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3018	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3019	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3020	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3021	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C3024	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C3025	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3030	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3031	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C3033,34	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	2	
C3035	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3036	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3037	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3038	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3039	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3040	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C3041	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3042	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3043	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3044	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C3045	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3046	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3047	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3048	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3049	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3050	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3051	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3052	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3054,55	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3502	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3504	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3505	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3506	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3507-10	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C4001	ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C4002	ECQB1H822JF	P.CAPACITOR 50V 8200P	1	
C4003	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4004	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C4005	ECUM1H272KBN	C.CAPACITOR CH 50V 2700P	1	
C4006	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4007	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C4010,11	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	2	
C4012	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4013	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4014	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4015	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4016	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4017	ECUM1H222JN	C.CAPACITOR CH 50V 2200P	1	
C4018	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4019	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4020	ECUM1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C4021	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C4068	ECQV1H154JM	P.CAPACITOR 50V 0.15U	1	
C4070	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4071	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4072	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C4073	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4074	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4075	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4076	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4077	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4078	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4079	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4080	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4901,02	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4904	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4905	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4907	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4908	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4912,13	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4917-19	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C4920	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4921	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4922	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4923,24	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4925	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4926	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4927	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4928	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4929,30	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4931	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4933	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4935	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4936	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4937	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4938	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4939	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4940	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4941	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6001	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C6002	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6003	ECUM1H200JCN	C.CAPACITOR CH 50V 20P	1	
C6004	ECUM1H120JCN	C.CAPACITOR CH 50V 12P	1	
C6005	ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6007	ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C6011	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C6012	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6013	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C6018	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C6019	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C6020	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6021	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C6022	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6023	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6024	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C6025	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C6026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C7501	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7502	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7505	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7506	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7509	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514	VCE0073	SUPER CAPACITOR	1	
C7515	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7517,18	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7519	ECUM1H683ZFN	C.CAPACITOR CH 50V 0.068U	1	
C7520	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7601	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7602	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7603	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7605,06	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	2	
C7607	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7608	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7609	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7610	ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7611	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7612	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7614	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C7615	ECQV1H104JM	P.CAPACITOR 50V 0.1U	1	
C7618	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C7619	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7622	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7624,25	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C7626	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7701	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7705	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7709	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7711	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7712,13	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7714	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7715	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7716	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7717	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C7718	ECUM1H471JCN	C.CAPACITOR CH 50V 470P	1	
C7719	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7722,23	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	2	
C7724	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7725	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7726	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7728	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C7729	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7730	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7731	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C7732,33	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	2	
C7734,35	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C7736	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7739	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C7745	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7749,50	ECUM1H270JCN	C.CAPACITOR CH 50V 27P	2	
C7757	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C7783	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C7784	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7786	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7801	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7802	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C7803	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C7804	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
D0702	MA77	DIODE	1	
D1003	1SS254	DIODE	1	
D1004	MA4051N-H	DIODE	1	[SUPPLIED FROM MBV]
D1006	MA4130N-L	DIODE	1	[SUPPLIED FROM MBV]
D1009	MA4051N-M	DIODE	1	
D1010	1SS254	DIODE	1	
D1011,12	11ES1	DIODE	2	
D1015,16	1SS254	DIODE	2	
D1017	MA4120N-M	DIODE	1	
D1018	1SS254	DIODE	1	
D1501	SIR505S	DIODE	1	
D2502	1SS254	DIODE	1	
D2504,05	1SS254	DIODE	2	
D3001	1SS254	DIODE	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
D4001	1SS254	DIODE	1	
D4905,06	MA4075N-M	DIODE	2	[SUPPLIED FROM MBV]
D6001	MA700	DIODE	1	
D6003	MA700	DIODE	1	
D6004	RB441P	DIODE	1	
D7521	MA4220N-M	DIODE	1	[SUPPLIED FROM MBV]
D7601	MA4300M	DIODE	1	
D7603,04	1SS254	DIODE	2	
D7701	1SS355	DIODE	1	
D7801	MA4051N-M	DIODE	1	
D7802	1SS254	DIODE	1	
DP7501	VSL0533-B	FIP	1	[SUPPLIED FROM MBV]
IC0701	LA75503	IC	1	[SUPPLIED FROM MBV]
IC1001	PQ20VB2E	IC	1	[SUPPLIED FROM MBV]
IC1201	UPC1093J	IC	1	[SUPPLIED FROM MBV]
IC1501,02	RPI354N	IC	2	[SUPPLIED FROM MBV]
IC2501	NJM2904M	IC	1	
IC2502	AN3811NK	IC	1	[SUPPLIED FROM MBV]
IC3001	TDA9735HV3	IC	1	[SUPPLIED FROM MBV]
IC3501	AN3368SB	IC	1	[SUPPLIED FROM MBV]
IC4901	LA73020M-TLM	IC	1	[SUPPLIED FROM MBV]
IC6001	M37777VFGC	IC	1	[SUPPLIED FROM MBV]
IC7501	M35500AFP	IC	1	[SUPPLIED FROM MBV]
IC7502	S80743AL	IC	1	
IC7503	RN5VD28AA	IC	1	[SUPPLIED FROM MBV]
IC7504	PNA4611M02VT	IR RECEIVER UNIT	1	[SUPPLIED FROM MBV]
IC7701	M306H0SFP	IC	1	[SUPPLIED FROM MBV]
IC7702	M27C4001BDAA	IC	1	[SUPPLIED FROM MBV]
IC7801	M24C16-WBN6	IC	1	[SUPPLIED FROM MBV]
⚠IP1001,02	UNH000300A	IC PROTECTOR	2	
⚠IP1201,02	UNH000300A	IC PROTECTOR	2	
⚠IP7801	UNH000300A	IC PROTECTOR	1	
JK4903	VJS3634	21-PIN SCART JACK	1	[SUPPLIED FROM MBV]
K0703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K0707-09	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	3	
K1001	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K2501	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3002	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K3506-08	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	3	
K4005,06	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K4011	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4901	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4905	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K4910,11	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K4916	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K6001	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K6006,07	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
K7503	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7603	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
K7702	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
K7703	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
K7712	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
L0701	ELJNAR18JF	CHIP INDUCTOR	1	[SUPPLIED FROM MBV]
L0703	ELJNA2R2JF	CHIP INDUCTOR	1	
L0705	ELESE330KA	COIL 33UH	1	
L2502	VLQ0599J101	COIL 100UH	1	
L2503	VLQ0599J680	COIL 68UH	1	
L3001	VLQ0599J220	COIL 22UH	1	
L3003	VLQ0599J470	COIL 47UH	1	
L3004	VLQ0599J680	COIL 68UH	1	
L3005,06	VLQ0599J101	COIL 100UH	2	
L3007	VLQ0599J330	COIL 33UH	1	
L3008	VLQ0599J470	COIL 47UH	1	
L3009	VLQ0599J390	COIL 39UH	1	
L3010	VLQ0599J560	COIL 56UH	1	
L3501	VLQ0599J330	COIL 33UH	1	
L4001	ELELN153JA	INDUCTOR 15000UH	1	[SUPPLIED FROM MBV]
L4006,07	VLQ0599J680	COIL 68UH	2	
L4901	VLQ0599JR22	COIL 0.22UH	1	[SUPPLIED FROM MBV]
L4902	VLQ0599J680	COIL 68UH	1	
L4904	VLQ0599J680	COIL 68UH	1	
L6001	VLQ0599J221	COIL 220UH	1	
L7601-04	VLQ0599J330	COIL 33UH	4	
L7701	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7703	VLQ0822J270	COIL 27UH	1	[SUPPLIED FROM MBV]
L7704	VLQ0822J390	COIL 39UH	1	[SUPPLIED FROM MBV]
L7706	VLQ0822J100	COIL 10UH	1	[SUPPLIED FROM MBV]
L7712	VLQ0822J101	COIL 100UH	1	[SUPPLIED FROM MBV]
LB3001,02	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
LB3501-04	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	4	
LB4904	VLP0147	COIL	1	
LB4907	VLP0147	COIL	1	
LB7801	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
P1001	VJS3917A016W	CONNECTOR (FEMALE) 16P	1	
P1501	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P2501	VJP3835A012	CONNECTOR (MALE) 12P	1	
P2502	VJS3537A009G	CONNECTOR (FEMALE) 9P	1	
P3502	VJS3537A010G	CONNECTOR (FEMALE) 10P	1	
P4002	VJS3837A002	CONNECTOR (FEMALE) 2P	1	
P4003	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
P7502	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
PK0701	VJR0826E009W	CONNECTOR (MALE) 9P	1	
PP0701	VJP3589A004B	CONNECTOR (MALE) 4P	1	
PS7701	VJR0777B007W	CONNECTOR (MALE) 7P	1	
PS7703	VJR0777B014W	CONNECTOR (MALE) 14P	1	
Q0701,02	2SD601A-S	TRANSISTOR	2	[SUPPLIED FROM MBV]
Q1001	2SD601A	TRANSISTOR	1	
Q1002	2SD602A	TRANSISTOR	1	
Q1003	2SD1996-S	TRANSISTOR	1	
Q1004	2SB710A	TRANSISTOR	1	
Q1005,06	2SD1996-S	TRANSISTOR	2	
Q1007	2SD602A-R	TRANSISTOR	1	
Q1009	2SD1996-S	TRANSISTOR	1	
Q1201,02	2SD1996-S	TRANSISTOR	2	
Q1501	PNB2301MBV	TRANSISTOR	1	
Q1502	PNB2301MAV	TRANSISTOR	1	
Q3003	2SB709A	TRANSISTOR	1	
Q4001	2SD1149	TRANSISTOR	1	
Q4002	2SD601A	TRANSISTOR	1	
Q4004	2SB710-R	TRANSISTOR	1	
Q4005	2SD602A-R	TRANSISTOR	1	
Q4006	2SB710-R	TRANSISTOR	1	
Q4007	2SD602A-R	TRANSISTOR	1	
Q4901	2SB709A	TRANSISTOR	1	
Q4903,04	2SD601A	TRANSISTOR	2	
Q4905	2SD1328-S	TRANSISTOR	1	
Q7501	2SB709A	TRANSISTOR	1	
Q7502	2SD1994	TRANSISTOR	1	
Q7601	2SD601A	TRANSISTOR	1	
Q7703,04	2SD1819A	TRANSISTOR	2	
Q7705	2SD601A	TRANSISTOR	1	
Q7706	2SB709A	TRANSISTOR	1	
Q7707	2SB1218A	TRANSISTOR	1	
Q7709	2SB1218A	TRANSISTOR	1	
Q7710-12	2SD601A	TRANSISTOR	3	
Q7719	2SD601A	TRANSISTOR	1	
Q7801	2SD1996-S	TRANSISTOR	1	
QR1001	MUN2112	TRANSISTOR-RESISTOR	1	
QR1002	MUN2211	TRANSISTOR-RESISTOR	1	
QR1003	MUN2212	TRANSISTOR-RESISTOR	1	
QR1005	MUN2211	TRANSISTOR-RESISTOR	1	
QR4001	UN2217	TRANSISTOR-RESISTOR	1	
QR4002	MUN2113	TRANSISTOR-RESISTOR	1	
QR4003,04	MUN2212	TRANSISTOR-RESISTOR	2	
QR4006	MUN2111	TRANSISTOR-RESISTOR	1	
QR4007	MUN2212	TRANSISTOR-RESISTOR	1	
QR4008	MUN2211	TRANSISTOR-RESISTOR	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
QR4009,10	UN2215	TRANSISTOR	2	
QR4903	MUN2212	TRANSISTOR-RESISTOR	1	
QR6002	MUN2211	TRANSISTOR-RESISTOR	1	
QR6004	MUN2212	TRANSISTOR-RESISTOR	1	
R0705	ERJ3GEYJ362	M.RESISTOR CH 1/16W 3.6K	1	
R0707	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R0708	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0711	ERJ3GEYJ181	M.RESISTOR CH 1/16W 180	1	
R0715	ERJ3GEYJ223	M.RESISTOR CH 1/16W 22K	1	
R0717	ERJ3GEYG471	M.RESISTOR CH 1/16W 470	1	
R0719	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R0723,24	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	2	
R0725	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R0726	ERJ3GEYJ683	M.RESISTOR CH 1/16W 68K	1	
R0727	ERJ3GEY0R00	M.RESISTOR CH 1/16W 0	1	
R0729	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R0730	ERJ6GEYG103	M.RESISTOR CH 1/10W 10K	1	
R0733	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0734	ERJ3GEYJ392	M.RESISTOR CH 1/16W 3.9K	1	
R0737	ERJ3GEYJ331	M.RESISTOR CH 1/16W 330	1	
R0739	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	1	
R0740	ERJ3GEYG271	M.RESISTOR CH 1/16W 270	1	[SUPPLIED FROM MBV]
R0741	ERJ3GEYJ221	M.RESISTOR CH 1/16W 220	1	
R0742	ERJ8GEYJ151	M.RESISTOR CH 1/8W 150	1	
R0745	ERJ6GEYJ335	M.RESISTOR CH 1/10W 3.3M	1	
R0746	ERJ6GEYJ564	M.RESISTOR CH 1/10W 560K	1	
R1001,02	ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R1003,04	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R1005	ERDS2TJ152	C.RESISTOR 1/4W 1.5K	1	
R1006	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R1008	ERDS2TJ822	C.RESISTOR 1/4W 8.2K	1	
R1009,10	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R1011	ERJ6GMYG823	M.RESISTOR CH 1/10W 82K	1	
R1012	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R1013	ERJ6GMYG153	M.RESISTOR CH 1/10W 15K	1	
R1014	ERJ6GMYG163	M.RESISTOR CH 1/10W 16K	1	
R1015	ERJ6GMYG123	M.RESISTOR CH 1/10W 12K	1	
R1016,17	ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	2	
R1018,19	ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R1022	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1023	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R1024	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R1026	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R1027	ERDS2TJ123	C.RESISTOR 1/4W 12K	1	
R1201,02	ERJ6GMYG272	M.RESISTOR CH 1/10W 2.7K	2	
R1203	ERJ6GMYJ623	M.RESISTOR CH 1/10W 6.2K	1	
R1204	ERDS2TJ102	C.RESISTOR 1/4W 1K	1	
R1501	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1502	ERDS2TJ181	C.RESISTOR 1/4W 180	1	
R1503	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R1504	ERDS2TJ121	C.RESISTOR 1/4W 120	1	
R1505	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R1506	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2501	ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R2502	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2503	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2504	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2505	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2506,07	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2508	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2510	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2511	ERJ6GMYG433	M.RESISTOR CH 1/10W 43K	1	
R2513	ERJ6GMYJ274	M.RESISTOR CH 1/10W 270	1	
R2514	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2515,16	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R2517	ERDS1TJ1R2	C.RESISTOR 1/2W 1.2	1	
R2518	ERDS1TJ1R5	C.RESISTOR 1/2W 1.5	1	
R2519	ERDS2TJ330	C.RESISTOR 1/4W 33	1	
R2532	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3001	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R3002	ERJ6GMYG301	M.RESISTOR CH 1/10W 300	1	
R3004	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3007	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3008	ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R3009	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R3010	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R3011,12	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R3013	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3020	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3021	ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R3022	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R3023	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3024	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3025	ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R3026	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3027	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3028	ERJ6GMYG152	M.RESISTOR CH 1/10W 1.5K	1	
R3029	ERJ6GMYG331	M.RESISTOR CH 1/10W 330	1	
R3030	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R3031	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R3032	EROS2CKG3300	M.RESISTOR 1/4W 330	1	
R3033	ERJ6GMYG271	M.RESISTOR CH 1/10W 270	1	
R3034	ERJ6GMYG681	M.RESISTOR CH 1/10W 680	1	
R3036	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3040	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3505	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4001	ERJ6GMYG334	M.RESISTOR CH 1/10W 330K	1	
R4002	ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4003	ERJ6GMYJ753	M.RESISTOR CH 1/10W 75K	1	
R4004	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4005	ERJ6GMYG241	M.RESISTOR CH 1/10W 240	1	
R4006	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4007	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4008	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
R4009	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R4010	ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R4011	ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R4012	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4014	ERJ6GMYK225	M.RESISTOR CH 1/10W 2.2M	1	
R4015	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4016	ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R4018	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4019	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4049	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R4060	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4061	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4062	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R4063	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4064	ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4065	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4066	ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R4071	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4072	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R4073	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4504	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4506	ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R4901	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4903	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4907,08	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R4909	ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R4911	ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R4912	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R4913	ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4915	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4916	ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4917	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4921,22	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4924,25	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4926,27	ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	2	
R4928,29	ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	2	
R4930	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R4931	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R4932	ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4933,34	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6001	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6002	ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6003	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6005	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
R6006	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6007	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R6008,09	ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R6010	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R6012,13	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R6018	ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6019	ERJ6GMYK106	M.RESISTOR CH 1/10W 10M	1	
R6020	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6021	ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R6022	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6031	ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R6035	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6036,37	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R6038	ERJ6GMYJ433	M.RESISTOR CH 1/10W 43K	1	
R6039	ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R6063	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7501	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7502,03	ERJ6GMYJ202	M.RESISTOR CH 1/10W 2K	2	
R7504	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7505	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7506-08	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R7509	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7510	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7511	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7512	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7513	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7514	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7515	ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7516	ERJ6GMYJ432	M.RESISTOR CH 1/10W 4.3K	1	
R7517	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7518,19	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	2	
R7520,21	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R7522	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7523-25	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	3	
R7526	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7527	ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7528	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7529	ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R7530	ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R7531,32	ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7533	ERJ6GMYJ303	M.RESISTOR CH 1/10W 30K	1	
R7535	ERJ6GMYJ123	M.RESISTOR CH 1/10W 12K	1	
R7536	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7540	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7545	ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R7549	ERDS2TJ150	C.RESISTOR 1/4W 15	1	
R7601,02	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7603	ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7606,07	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	2	
R7608,09	ERDS2TJ331	C.RESISTOR 1/4W 330	2	
R7610	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7612	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7613	ERJ6GMYJ151	M.RESISTOR CH 1/10W 150	1	
R7614	ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R7615	ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R7701	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7703	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7707	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R7708-10	ERJ6GEYG511	M.RESISTOR CH 1/10W 510	3	
R7711,12	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7713	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7714	ERJ3GEYG153	M.RESISTOR CH 1/16W 15K	1	
R7715	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7716	ERJ3GEYG562	M.RESISTOR CH 1/16W 5.6K	1	
R7717	ERJ3GEYJ104	M.RESISTOR CH 1/16W 100K	1	
R7718,19	ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	2	
R7721	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7722	ERJ3GEYJ563	M.RESISTOR CH 1/16W 56K	1	
R7723	ERJ3GEYJ393	M.RESISTOR CH 1/16W 39K	1	
R7724	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7727	ERJ6GEYG152	M.RESISTOR CH 1/10W 1.5K	1	
R7729	ERJ3GEYG102	M.RESISTOR CH 1/16W 1K	1	
R7730	ERJ3GEYG332	M.RESISTOR CH 1/16W 3.3K	1	
R7732	ERJ6GEYJ273	M.RESISTOR CH 1/10W 27K	1	
R7733	ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R7734	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7735	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7736	ERJ6GEYG221	M.RESISTOR CH 1/10W 220	1	
R7737	ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7738	ERJ6GEYK225	M.RESISTOR CH 1/10W 2.2M	1	
R7739	ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7754-56	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	3	
R7758,59	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7760	ERJ6GEY0R00	M.RESISTOR CH 1/10W 0	1	
R7762	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7764	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7769,70	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	2	
R7775	ERJ3GEYJ103	M.RESISTOR CH 1/16W 10K	1	
R7776	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7780	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	1	
R7784,85	ERJ3GEYG472	M.RESISTOR CH 1/16W 4.7K	2	
R7786	ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7801	ERDS2TJ222	C.RESISTOR 1/4W 2.2K	1	
R7802	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7803	ERJ6GMYJ101	M.RESISTOR CH 1/10W 100	1	
R7804,05	ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R7815,16	ERJ3GEYJ101	M.RESISTOR CH 1/16W 100	2	
R7848	ERJ3GEYJ561	M.RESISTOR CH 1/16W 560	1	
R7858	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7863	ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7865	ERJ3GEYG152	M.RESISTOR CH 1/16W 1.5K	1	
R7866	ERJ6GEYG222	M.RESISTOR CH 1/10W 2.2K	1	
RX7702-05	VRE0219A101	NETWORK RESISTOR	4	[SUPPLIED FROM MBV]
RX7708,09	VRE0219A101	NETWORK RESISTOR	2	[SUPPLIED FROM MBV]
S1501	VSS0520-3	MODE SELECT SWITCH	1	[SUPPLIED FROM MBV]
S6001	VES0834	S-TAB SWITCH	1	
S7503,04	EVQ11L07B	SWITCH	2	
S7506,07	EVQ11L07B	SWITCH	2	
S7509,10	EVQ11L07B	SWITCH	2	
S7516,17	EVQ11L07B	SWITCH	2	
T0701	EQV5EC082P	TRANSFORMER	1	[SUPPLIED FROM MBV]
T4001	EQQ7QF026P	TRANSFORMER	1	
T4002	EQQ7QF025P	TRANSFORMER	1	
TH7501	VRT0162M220	THERMISTOR	1	
⚠TU7601	ENG47306G1	TUNER	1	[SUPPLIED FROM MBV]
VR0701	EVNCBAA00B14	V.RESISTOR	1	
X0701	VLF1416	FILTER	1	[SUPPLIED FROM MBV]
X0704	VLF1493	FILTER	1	[SUPPLIED FROM MBV]
X3001	VSX0162	CRYSTAL OSCILLATOR	1	
X6001	VSX0830	CRYSTAL OSCILLATOR	1	
X6002	VSX0660	CRYSTAL OSCILLATOR	1	
X7701	VSX1043	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4999	SHIELD CASE (MIDDLE)	1	[SUPPLIED FROM MBV]
	VSC4998	HA ANGLE	1	[SUPPLIED FROM MBV]
	VXQ0648	FIP HOLDER	1	
	VMP4894	SUPPORT ANGLE	1	FOR OSD C.B.A.
	VMP4471	TV DEMODULATOR ANGLE	1	FOR TV DEMODULATOR C.B.A.
■	VEP06D26U	MAIN C.B.A.		[SUPPLIED FROM MBV] (RTL) NV-SJ410B-S
C0701	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0702	ECUX1H102KBV	C.CAPACITOR CH 50V 1000P	1	
C0703	ECUM1A105KBN	C.CAPACITOR CH 10V 1U	1	
C0704	ECUM1E333KBN	C.CAPACITOR CH 25V 0.033U	1	
C0706	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C0707	ECEA1HKA2R2	E.CAPACITOR 50V 2.2U	1	
C0708	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C0709	ECUX1H470JCV	C.CAPACITOR CH 50V 47P	1	
C0710	ECUX1H103ZFV	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C0711	ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C0712	ECUX1C104ZFV	C.CAPACITOR CH 16V 0.1U	1	
C0713	EEUFA1A391	E.CAPACITOR 10V 390U	1	
C0714	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C0715	ECUX1H030CCV	C.CAPACITOR CH 50V 3P	1	
C0716	ECUM1H223KBV	C.CAPACITOR CH 50V 0.022U	1	[SUPPLIED FROM MBV]
C0717	ECUM1H330GUV	C.CAPACITOR CH 50V 33P	1	
C0718	ECEA1CKN100	E.CAPACITOR 16V 10U	1	
C0719	ECUX1E104ZFV	C.CAPACITOR CH 25V 0.1U	1	
C0721	ECUX1H820JCV	C.CAPACITOR CH 50V 82P	1	
C0722	ERJ3GEYJ123	M.RESISTOR CH 1/16W 12K	1	
C0724	ECUX1H331KBV	C.CAPACITOR CH 50V 330P	1	
C1001	ECEA1AKG220	E.CAPACITOR 10V 22U	1	
C1002	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1003	ECEA1CGE470	E.CAPACITOR 16V 47U	1	
C1004	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1005	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1006,07	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C1008	ECA1CAK470X	E.CAPACITOR 16V 47U	1	
C1009	ECEA1AKA470	E.CAPACITOR 10V 47U	1	
C1010	ECEA1VGE470	E.CAPACITOR 35V 47U	1	
C1011,12	ECEA1CKA100	E.CAPACITOR 16V 10U	2	
C1201	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1202	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1203	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C1204	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1205	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C1206,07	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C1208	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C1501	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2501	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C2502	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2504	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2505	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C2506	ECEA1HKNR47	E.CAPACITOR 50V 0.47U	1	
C2507-10	ECUM1H563ZFN	C.CAPACITOR CH 50V 0.056U	4	
C2511	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2512	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2513	ECEA1EKS4R7	E.CAPACITOR 25V 4.7U	1	
C2514	ECEA1CKS100	E.CAPACITOR 16V 10U	1	
C2516	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C2517	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C2518	ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2519	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2520	ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2521	ECEA1EKA470	E.CAPACITOR 25V 47U	1	
C2522	ECUM1E683KBN	C.CAPACITOR CH 25V 0.068U	1	
C2523-25	ECUM1C154KBN	C.CAPACITOR CH 16V 0.15U	3	
C2526	ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	1	
C2527	ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C2535,36	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3002,03	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	2	
C3004	ECEA1HKA3R3	E.CAPACITOR 50V 3.3U	1	
C3005	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3007	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3008	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3010	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3011	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3012,13	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C3014	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3015	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C3016	ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C3017	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3018	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3019	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C3020	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3021	ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C3024	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C3025	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3026	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3029	ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3030	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C3031	ECEA1HKAR47	E.CAPACITOR 50V 0.47U	1	
C3033,34	ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	2	
C3035	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	

Ref.No.	Part No.	Part Name & Description	Pcs	Remarks
C3036	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C3037	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3038	ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C3039	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3040	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C3041	ECEA1CKA100	E.CAPACITOR 16V 10U	1	
C3042	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3043	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3044	ECUM1H821JCN	C.CAPACITOR CH 50V 820P	1	
C3045	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C3046	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3047	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C3048	ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C3049	ECUM1H681JCN	C.CAPACITOR CH 50V 680P	1	
C3050	ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C3051	ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3052	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3054,55	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C3502	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3504	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3505	ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C3506	ECUM1H103KBN	C.CAPACITOR CH 50V 0.01U	1	
C3507-10	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	4	
C4001	ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C4002	ECQB1H822JF	P.CAPACITOR 50V 8200P	1	
C4003	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4004	ECEA1EKA4R7	E.CAPACITOR 25V 4.7U	1	
C4005	ECUM1H272KBN	C.CAPACITOR CH 50V 2700P	1	
C4006	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4007	ECUM1H122JCN	C.CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C4010,11	ECUM1H153KBN	C.CAPACITOR CH 50V 0.015U	2	
C4012	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4013	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4014	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4015	ECEA0JKA220	E.CAPACITOR 6.3V 22U	1	
C4016	ECEA1HKA0R1	E.CAPACITOR 50V 0.1U	1	
C4017	ECUM1H222JN	C.CAPACITOR CH 50V 2200P	1	
C4018	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4019	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4020	ECUM1H273KBN	C.CAPACITOR CH 50V 0.027U	1	
C4021	ECUM1C105ZFN	C.CAPACITOR CH 16V 1U	1	
C4068	ECQV1H154JM	P.CAPACITOR 50V 0.15U	1	
C4070	ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4071	ECUM1H101JCN	C.CAPACITOR CH 50V 100P	1	
C4072	ECEA0JKA221	E.CAPACITOR 6.3V 220U	1	
C4073	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4074	ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C4075	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4076	ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C4077	ECEA0JKA470	E.CAPACITOR 6.3V 47U	1	
C4078	ECUM1H223KBN	C.CAPACITOR CH 50V 0.022U	1	
C4079	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4080	ECEA1AKA220	E.CAPACITOR 10V 22U	1	
C4901,02	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4904	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4905	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4907	ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C4908	ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4912,13	ECUM1H470JCN	C.CAPACITOR CH 50V 47P	2	
C4917-19	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	3	
C4920	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4921	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4922	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4923,24	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4925	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4926	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4927	ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4928	ECEA0JKA331	E.CAPACITOR 6.3V 330U	1	
C4929,30	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	2	
C4931	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4933	ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C4935	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C4936	ECEA1HKA010	E.CAPACITOR 50V 1U	1	
C4937	ECUM1E104KBN	C.CAPACITOR CH 25V 0.1U	1	
C4938	ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C4939	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C4940	ECEA0JKA331	E. CAPACITOR 6. 3V 330U	1	
C4941	ECUM1E104KBN	C. CAPACITOR CH 25V 0. 1U	1	
C6001	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C6002	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6003	ECUM1H200JCN	C. CAPACITOR CH 50V 20P	1	
C6004	ECUM1H120JCN	C. CAPACITOR CH 50V 12P	1	
C6005	ECUM1H180JCN	C. CAPACITOR CH 50V 18P	1	
C6007	ECUM1H151JCN	C. CAPACITOR CH 50V 150P	1	
C6011	ECEA0JKS470	E. CAPACITOR 6. 3V 47U	1	
C6012	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6013	ECEA1CKA100	E. CAPACITOR 16V 10U	1	
C6018	ECUM1H102KBN	C. CAPACITOR CH 50V 1000P	1	
C6019	ECUM1H103KBN	C. CAPACITOR CH 50V 0. 01U	1	
C6020	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C6021	ECUM1H223KBN	C. CAPACITOR CH 50V 0. 022U	1	
C6022	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C6023	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6024	ECUM1E104KBN	C. CAPACITOR CH 25V 0. 1U	1	
C6025	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	1	
C6026	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7501	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C7502	ECEA1HKA100	E. CAPACITOR 50V 10U	1	
C7505	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7506	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C7509	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C7514	VCE0073	SUPER CAPACITOR	1	
C7515	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7517, 18	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C7519	ECUM1H683ZFN	C. CAPACITOR CH 50V 0. 068U	1	
C7520	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7601	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7602	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C7603	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7605, 06	ECUM1H330JCN	C. CAPACITOR CH 50V 33P	2	
C7607	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7608	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C7609	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7610	ECEA1HKA100	E. CAPACITOR 50V 10U	1	
C7611	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7612	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	1	
C7614	ECUM1H122JCN	C. CAPACITOR CH 50V 1200P	1	[SUPPLIED FROM MBV]
C7615	ECQV1H104JM	P. CAPACITOR 50V 0. 1U	1	
C7618	ECUM1E104KBN	C. CAPACITOR CH 25V 0. 1U	1	
C7619	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7622	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C7624, 25	ECUM1H101JCN	C. CAPACITOR CH 50V 100P	2	
C7626	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7701	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7705	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7709	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C7711	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7712, 13	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	2	
C7714	ECUM1H470JCN	C. CAPACITOR CH 50V 47P	1	
C7715	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7716	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C7717	ECUM1C105ZFN	C. CAPACITOR CH 16V 1U	1	
C7718	ECUM1H471JCN	C. CAPACITOR CH 50V 470P	1	
C7719	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7722, 23	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	2	
C7724	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C7725	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7728	ECEA1EKA4R7	E. CAPACITOR 25V 4. 7U	1	
C7729	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7730	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7731	ECUX1H820JCV	C. CAPACITOR CH 50V 82P	1	
C7732, 33	ECUM1H221JCN	C. CAPACITOR CH 50V 220P	2	
C7734, 35	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	2	
C7736	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7739	ECUX1C104ZFV	C. CAPACITOR CH 16V 0. 1U	1	
C7745	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7749, 50	ECUM1H270JCN	C. CAPACITOR CH 50V 27P	2	
C7757	ECEA0JKA101	E. CAPACITOR 6. 3V 100U	1	
C7783	ECEA0JKA221	E. CAPACITOR 6. 3V 220U	1	
C7784	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C7786	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
C7801	ECUM1H103ZFN	C. CAPACITOR CH 50V 0. 01U	1	
C7802	ECEA0JKA220	E. CAPACITOR 6. 3V 22U	1	
C7803	ECEA0JKA470	E. CAPACITOR 6. 3V 47U	1	
C7804	ECUM1H104ZFN	C. CAPACITOR CH 50V 0. 1U	1	
D0702	MA77	DIODE	1	
D1003	1SS254	DIODE	1	
D1004	MA4051N-H	DIODE	1	[SUPPLIED FROM MBV]
D1006	MA4130N-L	DIODE	1	[SUPPLIED FROM MBV]
D1009	MA4051N-M	DIODE	1	
D1010	1SS254	DIODE	1	
D1011, 12	11ES1	DIODE	2	
D1015, 16	1SS254	DIODE	2	
D1017	MA4120N-M	DIODE	1	
D1018	1SS254	DIODE	1	
D1501	SIR505S	DIODE	1	
D2502	1SS254	DIODE	1	
D2504, 05	1SS254	DIODE	2	
D3001	1SS254	DIODE	1	
D4001	1SS254	DIODE	1	
D4905, 06	MA4075N-M	DIODE	2	[SUPPLIED FROM MBV]
D6001	MA700	DIODE	1	
D6003	MA700	DIODE	1	
D6004	RB441P	DIODE	1	
D7521	MA4220N-M	DIODE	1	[SUPPLIED FROM MBV]
D7601	MA4300M	DIODE	1	
D7603, 04	1SS254	DIODE	2	
D7701	1SS355	DIODE	1	
D7801	MA4051N-M	DIODE	1	
D7802	1SS254	DIODE	1	
DP7501	VSL0533-B	FIP	1	[SUPPLIED FROM MBV]
IC0701	LA75503	IC	1	[SUPPLIED FROM MBV]
IC1001	PQ20VB2E	IC	1	[SUPPLIED FROM MBV]
IC1201	UPC1093J	IC	1	[SUPPLIED FROM MBV]
IC1501, 02	RPI354N	IC	2	[SUPPLIED FROM MBV]
IC2501	NJM2904M	IC	1	
IC2502	AN3811NK	IC	1	[SUPPLIED FROM MBV]
IC3001	TDA9735HV3	IC	1	[SUPPLIED FROM MBV]
IC3501	AN3368SB	IC	1	[SUPPLIED FROM MBV]
IC4901	LA73020M-TLM	IC	1	[SUPPLIED FROM MBV]
IC6001	M37777VFGC	IC	1	[SUPPLIED FROM MBV]
IC7501	M35500AFP	IC	1	[SUPPLIED FROM MBV]
IC7502	S80743AL	IC	1	
IC7503	RN5VD28AA	IC	1	[SUPPLIED FROM MBV]
IC7504	PNA4611M02VT	IR RECEIVER UNIT	1	[SUPPLIED FROM MBV]
IC7701	M306H0SFP	IC	1	[SUPPLIED FROM MBV]
IC7702	M27C4001BDAA	IC	1	[SUPPLIED FROM MBV]
IC7801	M24C16-WBN6	IC	1	[SUPPLIED FROM MBV]
⚠ IP1001, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP1201, 02	UNH000300A	IC PROTECTOR	2	
⚠ IP7801	UNH000300A	IC PROTECTOR	1	
JK4903	VJS3634	21-PIN SCART JACK	1	[SUPPLIED FROM MBV]
K0703	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
K0707	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
K0709	ERJ3GEY0R00	M. RESISTOR CH 1/16W 0	1	
K1001	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K2501	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K3002	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K3506-08	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	3	
K4005, 06	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K4011	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4901	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4905	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K4910, 11	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K4916	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K6001	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K6006, 07	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	2	
K7503	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	
K7603	ERJ6GMZ0R00	M. RESISTOR CH 1/10W 0	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R7707	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R7708-10	ERJ6GEYG511	M. RESISTOR CH 1/10W 510	3	
R7711, 12	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4. 7K	2	
R7713	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R7714	ERJ3GEYG153	M. RESISTOR CH 1/16W 15K	1	
R7715	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R7716	ERJ3GEYG562	M. RESISTOR CH 1/16W 5. 6K	1	
R7717	ERJ3GEYJ104	M. RESISTOR CH 1/16W 100K	1	
R7719	ERJ6GEYJ471	M. RESISTOR CH 1/10W 470	1	
R7721	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R7723	ERJ3GEYJ393	M. RESISTOR CH 1/16W 39K	1	
R7727	ERJ6GEYG152	M. RESISTOR CH 1/10W 1. 5K	1	
R7729	ERJ3GEYG102	M. RESISTOR CH 1/16W 1K	1	
R7730	ERJ3GEYG332	M. RESISTOR CH 1/16W 3. 3K	1	
R7732	ERJ6GEYJ273	M. RESISTOR CH 1/10W 27K	1	
R7733	ERJ6GEYJ473	M. RESISTOR CH 1/10W 47K	1	
R7734	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4. 7K	1	
R7735	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R7736	ERJ6GEYG221	M. RESISTOR CH 1/10W 220	1	
R7737	ERJ6GEYJ224	M. RESISTOR CH 1/10W 220K	1	
R7738	ERJ6GEYK225	M. RESISTOR CH 1/10W 2. 2M	1	
R7739	ERJ6GEYJ104	M. RESISTOR CH 1/10W 100K	1	
R7754-56	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	3	
R7758, 59	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R7760	ERJ6GEY0R00	M. RESISTOR CH 1/10W 0	1	
R7762	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R7764	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R7769, 70	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	2	
R7775	ERJ3GEYJ103	M. RESISTOR CH 1/16W 10K	1	
R7776	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R7780	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	1	
R7784, 85	ERJ3GEYG472	M. RESISTOR CH 1/16W 4. 7K	2	
R7786	ERJ6GEYJ472	M. RESISTOR CH 1/10W 4. 7K	1	
R7801	ERDS2TJ222	C. RESISTOR 1/4W 2. 2K	1	
R7802	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4. 7K	1	
R7803	ERJ6GMYJ101	M. RESISTOR CH 1/10W 100	1	
R7804, 05	ERJ6GMYJ472	M. RESISTOR CH 1/10W 4. 7K	2	
R7815, 16	ERJ3GEYJ101	M. RESISTOR CH 1/16W 100	2	
R7848	ERJ3GEYJ561	M. RESISTOR CH 1/16W 560	1	
R7858	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R7863	ERJ6GEYJ101	M. RESISTOR CH 1/10W 100	1	
R7865	ERJ3GEYG152	M. RESISTOR CH 1/16W 1. 5K	1	
R7866	ERJ6GEYG222	M. RESISTOR CH 1/10W 2. 2K	1	
RX7702-05	VRE0219A101	NETWORK RESISTOR	4	[SUPPLIED FROM MBV]
RX7708, 09	VRE0219A101	NETWORK RESISTOR	2	[SUPPLIED FROM MBV]
S1501	VSS0520-3	MODE SELECT SWITCH	1	[SUPPLIED FROM MBV]
S6001	VES0834	S-TAB SWITCH	1	
S7503, 04	EVQ11L07B	SWITCH	2	
S7506, 07	EVQ11L07B	SWITCH	2	
S7509, 10	EVQ11L07B	SWITCH	2	
S7516, 17	EVQ11L07B	SWITCH	2	
T0701	EQV5EC083P	TRANSFORMER	1	[SUPPLIED FROM MBV]
T4001	EQQ7QF026P	TRANSFORMER	1	
T4002	EQQ7QF025P	TRANSFORMER	1	
TH7501	VRT0162M220	THERMISTOR	1	
⚠TU7601	ENG47308G1	TUNER	1	[SUPPLIED FROM MBV]
VR0701	EVNCBAA00B14	V. RESISTOR	1	
X0701	VLF1417	FILTER	1	[SUPPLIED FROM MBV]
X0704	VLF1495	FILTER	1	[SUPPLIED FROM MBV]
X3001	VSX0162	CRYSTAL OSCILLATOR	1	
X6001	VSX0830	CRYSTAL OSCILLATOR	1	
X6002	VSX0660	CRYSTAL OSCILLATOR	1	
X7701	VSX1043	CRYSTAL OSCILLATOR	1	
		MISCELLANEOUS		
	VSC4999	SHIELD CASE (MIDDLE)	1	[SUPPLIED FROM MBV]
	VSC4998	HA ANGLE	1	[SUPPLIED FROM MBV]
	VXQ0648	FIP HOLDER	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
	VMP4894	SUPPORT ANGLE	1	FOR OSD C. B. A.
	VMP5897	CONNECTING ANGLE	1	FOR TV DEMODULATOR C. B. A.
■	VEP07992D	AV FRONT C. B. A.		[SUPPLIED FROM MBV]
				(RTL) NV-SJ410EG-S/EGMS
				NV-SJ410EGYS/B-S
C6502	ECKF1H821KB	C. CAPACITOR 50V 820P	1	
C6503	ECQV1H104JM	P. CAPACITOR 50V 0. 1U	1	
D6501-03	SLR932AVA	DIODE	3	[SUPPLIED FROM MBV]
JK6501	VJJ0575	RCA JACK (2P)	1	
P6501	VJS3537A006G	CONNECTOR (FEMALE) 6P	1	
R6501	ERDS2TJ750	C. RESISTOR 1/4W 75	1	
R6503	ERDS2TJ102	C. RESISTOR 1/4W 1K	1	
		MISCELLANEOUS		
	VMD0504	LED HOLDER	2	
	VMD2591	LED HOLDER	1	
⚠ ■	VEP01826AB	POWER C. B. A.		[SUPPLIED FROM MBV]
				(RTL)
⚠C1101	VCK0286E102	CERAMIC CAPACITOR	1	
C1102	ECQV1H104JM	P. CAPACITOR 50V 0. 1U	1	
⚠C1103, 04	VCK0286E102	CERAMIC CAPACITOR	2	
C1106	ECQE6104KF	P. CAPACITOR 630V 0. 1U	1	
C1108	ECCD3A470KGE	C. CAPACITOR 1KV 47P	1	
C1109	ECKD2H103PU	C. CAPACITOR 500V 0. 01U	1	
C1110	ECEA0JGE331	E. CAPACITOR 6. 3V 330U	1	
C1111	ECKF1H102KB	C. CAPACITOR 50V 1000P	1	
C1112	ECQB1H822JF	P. CAPACITOR 50V 8200P	1	
C1113	ERDS1TJ393	C. RESISTOR 1/2W 39K	1	
C1114	ECA1VGE470X	E. CAPACITOR 35V 47U	1	
C1116	ECKD2H101KB	C. CAPACITOR 500V 100P	1	
⚠C1118, 19	ECQU2A104MVA	P. CAPACITOR 250V 0. 1U	2	
C1120	ECEC2GG330	E. CAPACITOR 400V 33U	1	
C1131	EEUFA1E681	E. CAPASITOR 25V 680U	1	
C1132	EEUFA1E331L	E. CAPASITOR 25V 330U	1	[SUPPLIED FROM MBV]
C1133	ECKD2H101KB	C. CAPACITOR 500V 100P	1	
C1134	EEUFA1A122	E. CAPASITOR 10V 1200U	1	
C1135	ECEA1AGE331	E. CAPACITOR 10V 330U	1	
C1137	ECEA1JGE470	E. CAPACITOR 63V 47U	1	
C1138	ECKF1H103ZF	C. CAPACITOR 50V 0. 01U	1	
C1139	ECKD2H101KB	C. CAPACITOR 500V 100P	1	
C1140	ECEA1HGE101	E. CAPACITOR 50V 100U	1	
C1141	ECKF1H103ZF	C. CAPACITOR 50V 0. 01U	1	
C1142	ECKD2H101KB	C. CAPACITOR 500V 100P	1	
C1143	ECEA1AFZ331	E. CAPACITOR 10V 330U	1	
C1144, 45	ECQB1H103JF	P. CAPACITOR 50V 0. 01U	2	
⚠D1102	S1WBA60S	DIODE	1	
D1103	AP01C	DIODE	1	
D1104	MA185	DIODE	1	
D1105	MA700	DIODE	1	
D1106	MA4220-H	DIODE	1	
D1107	1SS254	DIODE	1	
⚠D1109, 10	ERA15-08	DIODE	2	
D1114	RK36	DIODE	1	
D1118	RD100E	ZENER DIODE	1	[SUPPLIED FROM MBV]
D1121	RL2ZP	DIODE	1	
D1123, 24	ERA22-04	DIODE	2	
D1125	11EQS04	DIODE	1	
D1130	MA7300B	DIODE	1	
⚠F1101	XBA2C16TH15	FUSE	1	[SUPPLIED FROM MBV]
IC1101	STRM6559LF	IC	1	[SUPPLIED FROM MBV]
IC1102	UPC1093J	IC	1	[SUPPLIED FROM MBV]

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
⚠IP1101	VSF0015A10	FUSE	1	[SUPPLIED FROM MBV]
⚠L1107	ELF15N005A	LINE FILTER	1	
⚠L1108	ELF17N004A	LINE FILTER	1	
L1121, 22	VLQ0655K220	COIL 22UH	2	
L1123, 24	ELESE101KA	COIL 100UH	2	
LB1105	VLP0074	COIL	1	
⚠P1101	VJS3306	AC INLET	1	
P1103	VJP3917A016G	CONNECTOR (MALE) 16P	1	
⚠Q1111	CNX82A5387	PHOTO COUPLER	1	[SUPPLIED FROM MBV]
R1101	ERDS2TJ561	C. RESISTOR 1/4W 560	1	
R1102	ERG1SJ393	M. RESISTOR 1W 39K	1	
R1105	ERDS1TJ395	C. RESISTOR 1/2W 3. 9M	1	
R1106	ERDS1TJ475	C. RESISTOR 1/2W 4. 7M	1	
R1107	ERDS2FJ224	C. RESISTOR 1/4W 220K	1	
R1108	ERDS2FJ101	C. RESISTOR 1/4W 100	1	
R1109	ERDS2FJ152	C. RESISTOR 1/4W 1. 5K	1	
R1110	ERDS2FJ103	C. RESISTOR 1/4W 10K	1	
R1111	ERDS2FJ181	C. RESISTOR 1/4W 180	1	[SUPPLIED FROM MBV]
R1112	ERDS2FJ331	C. RESISTOR 1/4W 330	1	
R1113	ERX1SJ1R0	M. RESISTOR 1W 1	1	
R1114	ERDS2FJ332	C. RESISTOR 1/4W 3. 3K	1	
R1115	ERDS2FJ330	C. RESISTOR 1/4W 33	1	[SUPPLIED FROM MBV]
R1116	ERDS2TJ272	C. RESISTOR 1/4W 2. 7K	1	
R1119	ERDS2TJ822	C. RESISTOR 1/4W 8. 2K	1	
R1120, 21	EROS2CKG2701	M. RESISTOR 1/4W 2. 7K	2	
⚠R1122	ERC12AGM334	S. RESISTOR 1/2W 330K	1	
R1125	ERDS2TJ271	C. RESISTOR 1/4W 270	1	
S7511-15	EVQ11L07B	SWITCH	5	
⚠T1101	VLT0940	SWITCHING TRANSFORMER	1	[SUPPLIED FROM MBV]
		MISCELLANEOUS		
	VMP5133	INLET ANGLE	1	
	VHD0418	SCREW	1	
	TP00351-51	FUSE HOLDER	2	
■	————	CYLINDER STATOR C. B. A.		
		MISCELLANEOUS		
	HW-300A-DF	HALL IC	1	[SUPPLIED FROM MBV]
	VJS3537B009G	CONNECTOR (FEMALE) 9P	1	

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks

INTERNAL REFERENCE CODE

NOTE: This chart is only for internal reference.
Do not order any parts accoding to these codes.

P.C.B.	FILM CODE
MAIN	HOMF00-06D26
POWER	HOMF02-01826
OSD PACK	HOMF00-07A12
AV FRONT	HOMF00-07992
TV DEMODU	HOMF00-07A23
CYLINDER DRIVE	HOMF00-000F8

Panasonic

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Service Manual

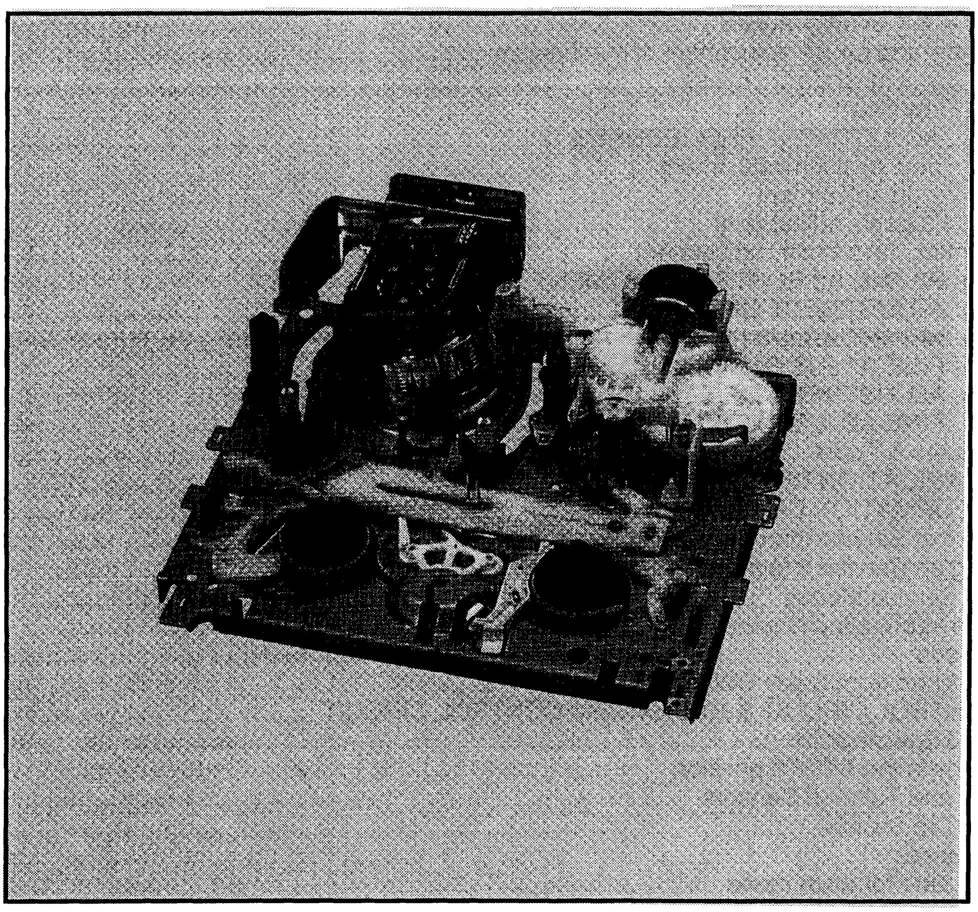
Video Cassette Recorder

Panasonic VHS

V20682

Z-MECHANISM CHASSIS

REV-1



INTRODUCTION

The Z-Mechanism chassis are built in several Panasonic VHS Video Cassette Recorders from NV-SD and NV-HD series in 1998.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Panasonic

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CONTENTS

1. OUTLINE OF Z MECHANISM 1
    - 1-1. The tape transport path 1
    - 1-2. Cassette holder unit 2
    - 1-3. Reel brake 2
    - 1-4. Number of Gear Phase Alignment Point and Replacement Parts 3
    - Z Mechanism Components 4
    - FLOW CHART OF LOADING MECHANISM 5
2. REMOVAL OF CASSETTE TAPE 6
    - 2-1. Removal of compulsory loading 6
    - 2-2. Removal of manual operation of Main cam gear 6
3. REMOVAL OF CASSETTE HOLDER UNIT & MECHANISM CHASSIS 7
    - 3-1. Removal of Cassette holder unit 7
    - 3-2. Removal of Mechanism chassis 8
4. DISASSEMBLY/ASSEMBLY METHOD FOR MECHANISM 9
    - 4-1. Disassembly of mechanism 9
    - 4-2. Assembly and phase adjustment of mechanism 14
    - 4-3. Assembly of mechanism chassis 20
    - Parts Access Flow Chart 23
5. MECHANICAL ADJUSTMENT PROCEDURES 24
    - 5-1. Tension post position adjustment 24
    - 5-2. Back tension adjustment 24
    - 5-3. P2 and P3 posts adjustment 25
    - 5-4. Tape interchangeability adjustment 25
        - 5-4-(1). P2 AND P3 POSTS ADJUSTMENT 26
        - 5-4-(2). ADJUSTMENT OF P4 POST 27
        - 5-4-(3). HEIGHT ADJUSTMENT OF A/C HEAD 28
        - 5-4-(4). FINE-ADJUSTMENT OF A/C HEAD 28
        - 5-4-(5). ADJUSTMENT OF X-VALUE 28
        - 5-4-(6). FINE-ADJUSTMENT OF X-VALUE 29
    - Servicing Fixtures & Tools 30
6. SELF-TEST INDICATION DISPLAY 31
7. SERVICE INFORMATION DISPLAY 33
    - 7-1. Purpose of Service Information Display 33
    - 7-2. Turning on Service Information Display 33
    - 7-3. Use of Service Modes 34
    - 7-4. Service Information Number 36
    - 7-5. Test Mode 36
    - 7-6. Timing chart from Mode SW to System control IC 38
8. SYSTEM CONTROL CIRCUIT & MECHANISM CONTROL CIRCUIT 39
    - 8-1. STOP 3 Specification 39
    - 8-2. Stand-by in the STOP3 position 39
    - 8-3. Supply and Take-up Sensors 40
    - 8-4. Safety Tab Switch 40
    - 8-5. Dew Sensor 41
    - 8-6. Setting time for each mode 42
    - 8-7. Operation of short CUE 42
    - 8-8. Loading/Unloading Mechanism lock 42
    - 8-9. Cassette loading/unloading lock 42
    - 8-10. Reel lock operation 43
    - 8-11. Cylinder lock 43
    - 8-12. Mode transition 44
    - 8-13. Power on reset 44
    - 8-14. Linear time counter operation 44
    - 8-15. Tape speed in CUE/REV mode 45
    - 8-16. Automatic functions 45
    - 8-17. CUE/REV lock mode 45
    - 8-18. FR (Forward/Reverse) search mode 45
    - 8-19. FF/REW speed 45
    - 8-20. FF/REW time 45

9. EXPLODED VIEWS & REPLACEMENT PARTS LIST
    - 9-1. MECHANICAL REPLACEMENT PARTS SECTION

1. OUTLINE OF Z MECHANISM

1-1. The tape transport path

(1) Mechanism Chassis

Aluminium Chassis has been changed to sheet metal (Thickness: 1.2 mm).

(2) Capstan position (Cassette-in method/Capstan-in method)

The Tape does not touch the Cassette tape so that the rationalization has been promoted such as Reel gear pinch up/down mechanism has been deleted.

(3) Deletion of P1 post

FE Head has been installed Limiter so that P1 post has been deleted.

(4) A/C Head base combined with P4 post

A/C Head has been combined with P4 post on the same base.

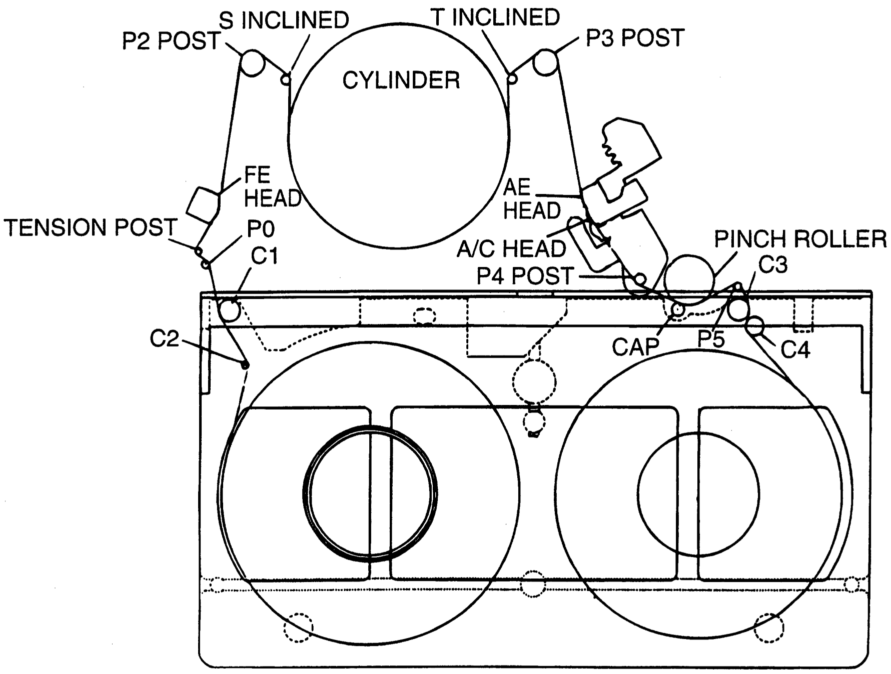
(5) Change of A/C head base type

The change of the angle winding the tape on A/C head has been reduced by the construction of A/C head base has been changed from the revolution type to slide base type.

(6) Improvement of P5 post

P5 post operation has been changed by non-adjustable of the Height and the Tilt adjustment so that the specification has been improved.

Z Mechanism tape transport path in REV mode



S INCLINED
T INCLINED
P2 POST
P3 POST
CYLINDER
FE
HEAD
AE
HEAD
TENSION POST
P0
C1
A/C HEAD
PINCH ROLLER
P4 POST
C3
C2
CAP
P5
C4

1-2. Cassette holder unit

(1) Cassette-in operation

The Rack drive arm drives Main Cam gear by inserting the cassette tape. Consequently, Position switch detects the cassette-in mode so that Loading motor drives. The mode goes to the Stop mode from the Cassette-in through the Loading mode.

① The parts quantity reduction of Cassette holder unit.
(Z Mechanism: 21 pieces, K Mechanism: 36 pieces)

a. Release lever has been installed in Right Side Plate.
b. Cassette guide has been installed in Front Panel unit.
c. Safety lever spring is made by the resin.
d. Opener lever has been changed into the single opener type.
e. One side of Side Plate unit is hung on Chassis in order to fix it.

② Improvement of the cassette insertion
(The force of the cassette insertion Z Mechanism: Approximately 400gm.,
K Mechanism: Approximately 600gm.)

The tooth pitch of Worm gear which has been extended against the previous model, is located on the Motor so that Worm gear can be reversed. Consequently, the Motor rotates before the insertion spring (the combined spring) is working when the cassette tape is inserted, so that the repelled force of the insertion spring has been reduced as differing from the present model.

③ Small-sized Cassette holder unit (Thinned unit)

a. The Wiper arm method which has been adopted, assigned Wiper arm between Cassette Holder Plate and Side Plate so that the small-sized of the width has been realized.
b. To prevent the increment of parts quantity such as Safety lever is used for Pre-open mechanism shown in the present model, and the small-sized unit has been realized by inclining one portion of the L groove in Side Plate.
c. The part of driving change-over is located in the nearest to the center of Reel so that the depth size is compacter.

1-3. Reel brake

(1) Supply Reel Brake is used for Tension Regulator which is composed of the conventional Main brake and the soft brake function.

(2) Take-up Reel Brake is used as Band Brake unit in order to correspond with Supply Reel Brake.

※ Tension Regulator performance:
This is composed of Tension regulator and brake. The tape always is given the tension against the advance direction by Tension band.

(3) Construction of Supply reel tension regulator
Comparison of the construction with the conventional model

	Z Mechanism	**K Mechanism**
Tension Arm Shaft Bearing construction	Resin	Tension arm
Tension Band	Felt less Lumiller	Felt Lumiller
Braking method	Tension regulator	Main & soft brake

Operating mode and necessary function

Mechanism mode	Necessary function	Operation
Cassette down	Prevention of the tape slag (Soft brake)	Soft brake
Completion of Loading	Prevention of the tape slag (Soft brake)	Tension regulator
REV	Prevention of in Play mode to REV mode (Soft brake)	Tension regulator
PLAY, FF	Back tension adjustment	Same as the conventional
STOP	Main brake function	Tension regulator

(4) Construction of Take-up brake

Take-up brake is used Band brake as well as Supply brake depend on corresponding with Band brake is adopted at the Supply Side.

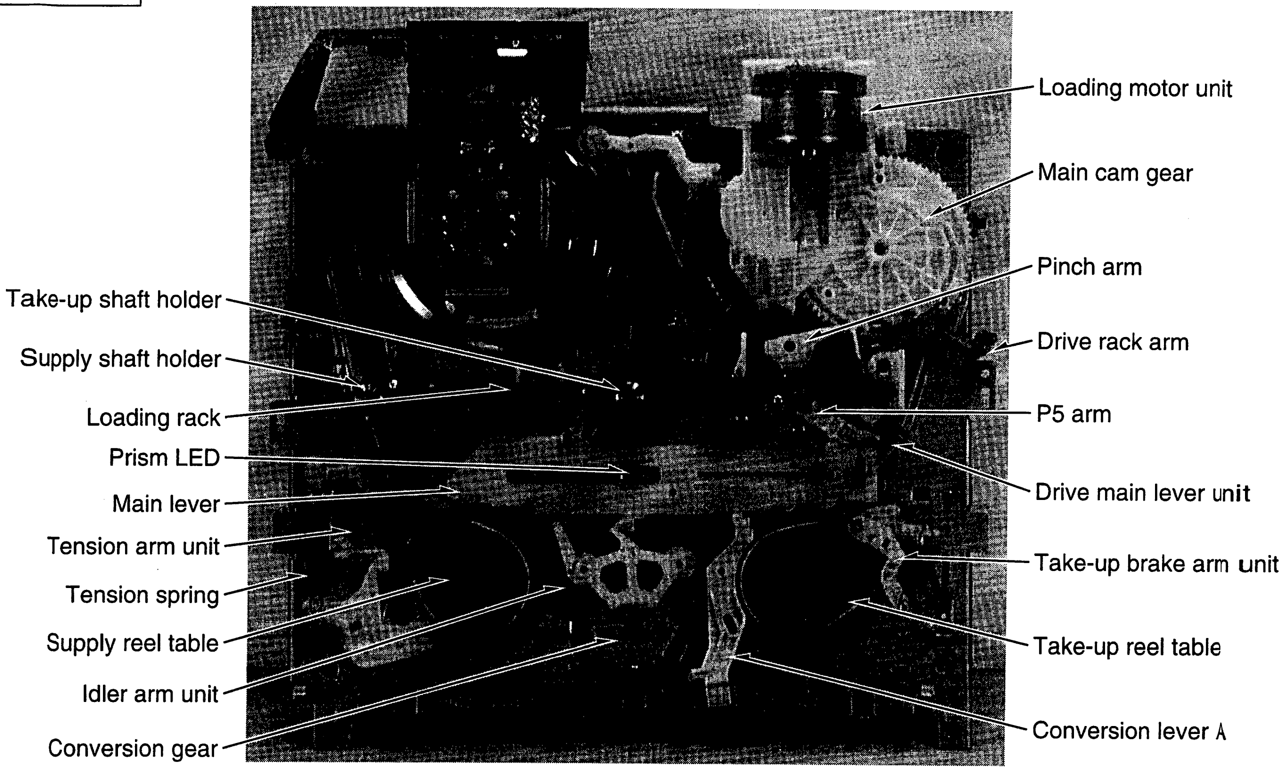
Mechanism mode	Function	Band
EJECT-MID	Soft brake	On
REV	Soft brake	On
PLAY	Release of brake	Off
STOP	Brake	On
FF/REW	Release of brake	Off

1-4. Number of Gear Phase Alignment Point and Replacement Parts

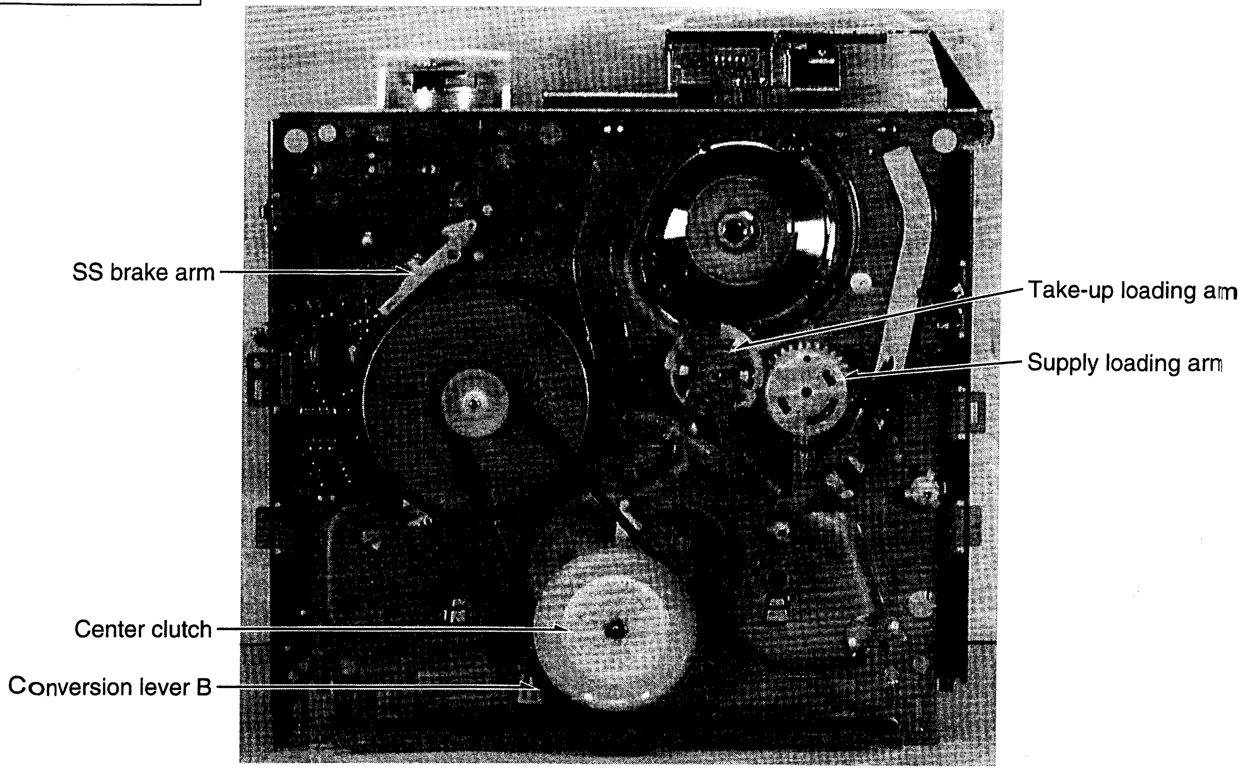
Number of Gear Phase˙ Alignment Point	
G2 Mechanism	12 Alignment Points
G Mechanism	12 Alignment Points
K Mechanism	6 Alignment Points
Z Mechanism	4 Alignment Points
Number of Replacement Parts˙ (including the Screw and Washer)	
G2 Mechanism	Approx.170 Pieces
G Mechanism	Approx. 150 Pieces
K Mechanism	Approx. 100 Pieces
Z Mechanism	Approx. 70 Pieces

Z Mechanism Components

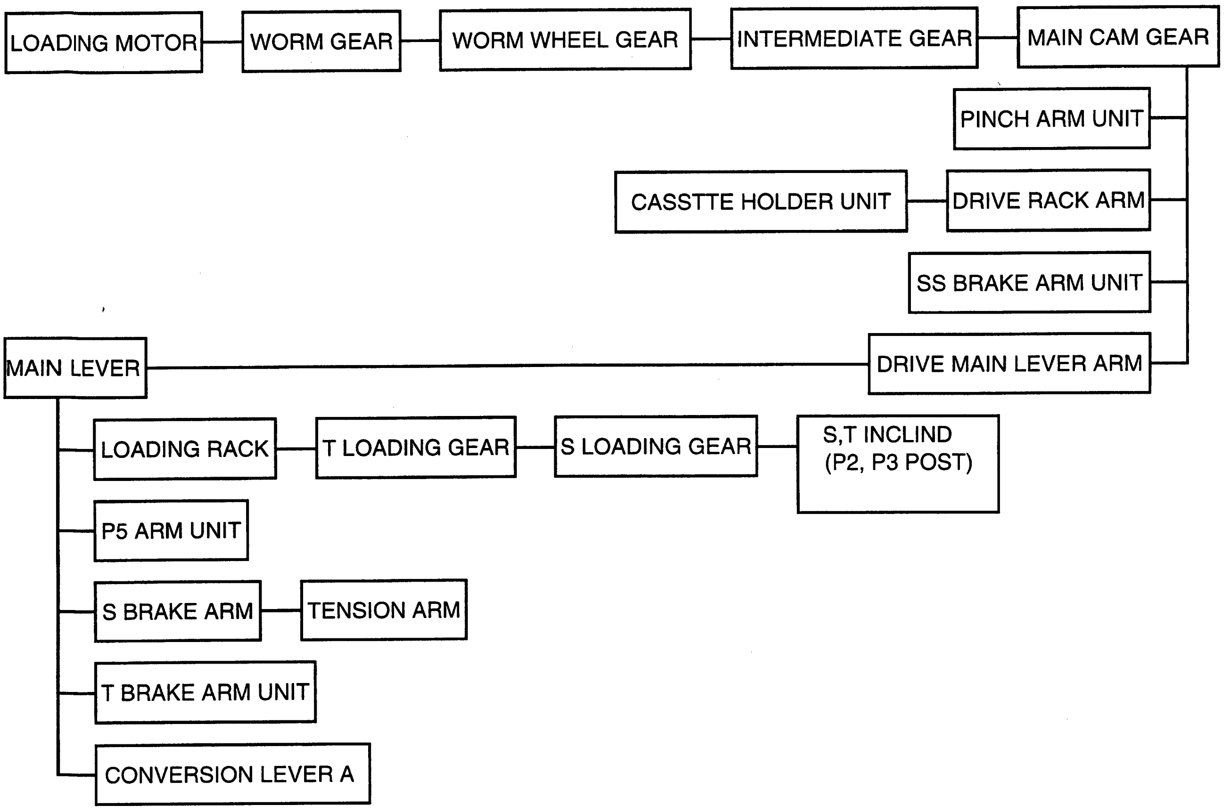
TOP VIEW

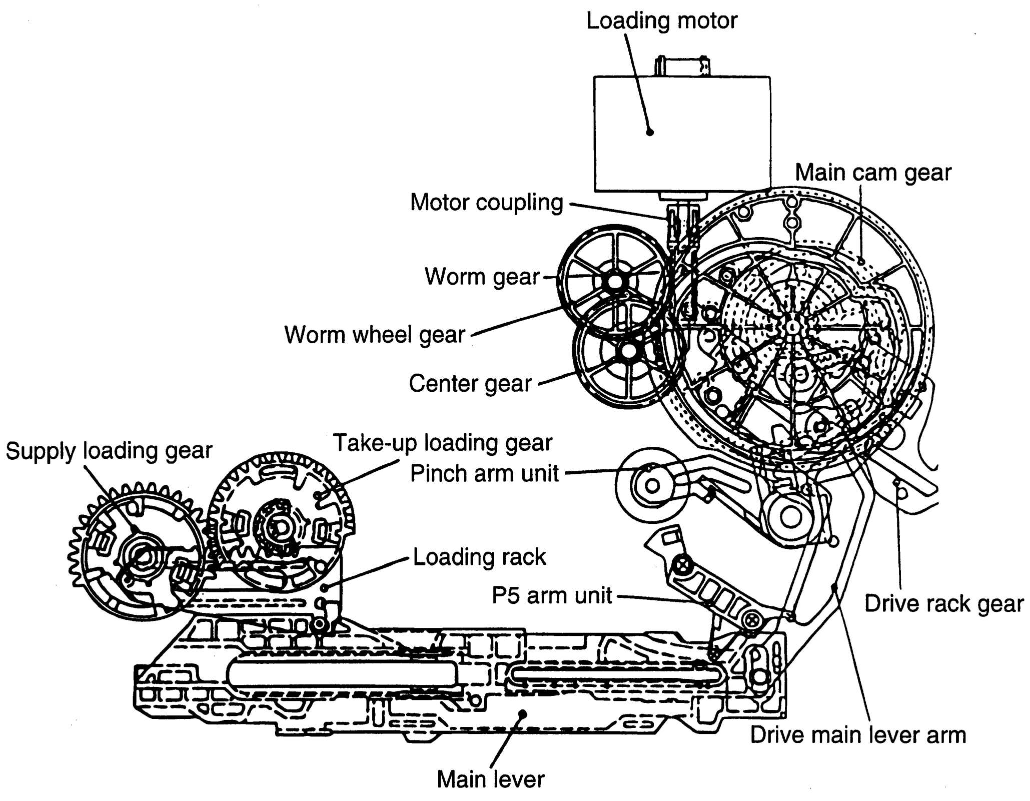

Loading motor unit
Main cam gear
Pinch arm
Drive rack arm
P5 arm
Drive main lever unit
Take-up brake arm unit
Take-up reel table
Conversion lever A
Take-up shaft holder
Supply shaft holder
Loading rack
Prism LED
Main lever
Tension arm unit
Tension spring
Supply reel table
Idler arm unit
Conversion gear

BOTTOM VIEW


SS brake arm
Take-up loading arm
Supply loading arm
Center clutch
Conversion lever B

FLOW CHART OF LOADING MECHANISM


LOADING MOTOR
WORM GEAR
WORM WHEEL GEAR
INTERMEDIATE GEAR
MAIN CAM GEAR
PINCH ARM UNIT
CASSTTE HOLDER UNIT
DRIVE RACK ARM
SS BRAKE ARM UNIT
MAIN LEVER
DRIVE MAIN LEVER ARM
LOADING RACK
T LOADING GEAR
S LOADING GEAR
S,T INCLIND (P2, P3 POST)
P5 ARM UNIT
S BRAKE ARM
TENSION ARM
T BRAKE ARM UNIT
CONVERSION LEVER A


Loading motor
Main cam gear
Motor coupling
Worm gear
Worm wheel gear
Center gear
Supply loading gear
Take-up loading gear
Pinch arm unit
Loading rack
P5 arm unit
Drive rack gear
Drive main lever arm
Main lever

2. REMOVAL OF CASSETTE TAPE

There are 2 ways to remove a cassette tape.

2-1. Removal of compulsory loading

(1) Press FF and EJECT buttons simultaneously for more than 3 seconds and set the Service Mode 7.

In case of VCR mounted shuttle ring, turn the shuttle ring to FF and then press EJECT button for more than 3 seconds.

In Loewe model, STOP button is used instead of FF button.

(2) Press STOP button in order to unload the mechanism. (Pay an attention of tape slack)

Service Mode Indication :

7 ※※ ※※ (STOP)→7 00 ※※ (EJECT)

2-2. Removal of manual operation of Main cam gear

(1) Disconnect the AC power cord and remove Top Panel.

(2) Rotate Main cam gear to the clockwise and unload the mechanism (Tape is remaining) (Fig. A1).

TOP VIEW

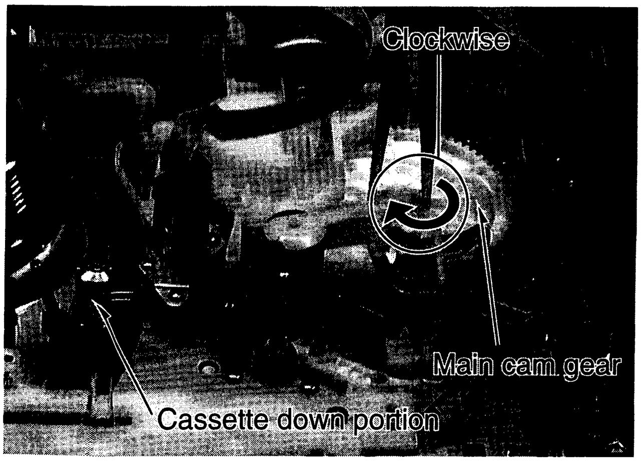


Fig. A1

(3) Rotate the Pole of Capstan motor to the clockwise from the bottom in order to remove the tape slack (Fig. A2).

BOTTOM VIEW

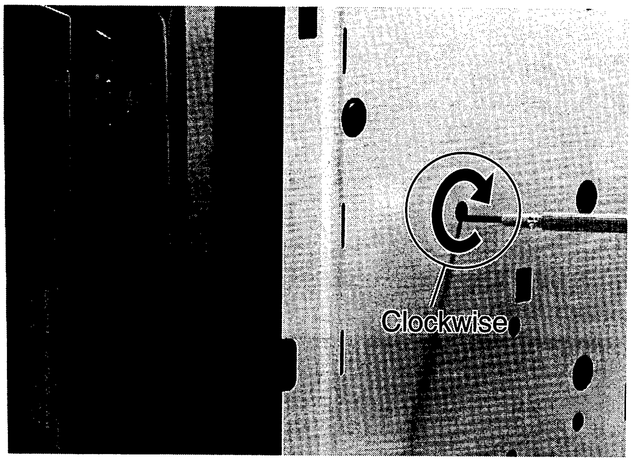


Fig. A2

(4) Rotate Main cam gear to the clockwise in order to eject the cassette tape.

3. REMOVAL OF CASSETTE HOLDER UNIT & MECHANISM CHASSIS

3-1. Removal of Cassette holder unit

(1) Remove Top panel and Front panel unit (Fig. B1).

TOP VIEW

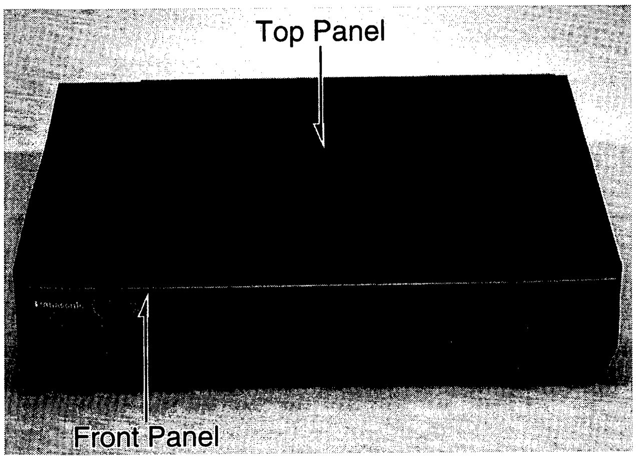

Top Panel
Front Panel

Fig. B1

(2) Remove Top plate

Remove 4 tabs fixing Top plate and remove Top plate (Fig. B2).

※ 4 Tabs should be removed softly due to they are fragile.

TOP VIEW

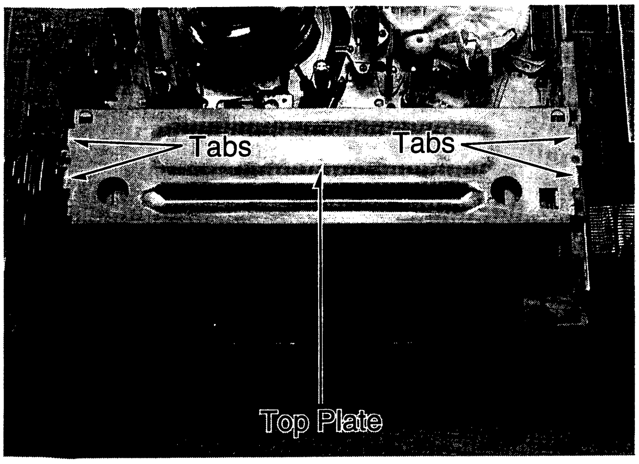

Tabs
Tabs
Top Plate

Fig. B2

(3) Remove Cassette Holder

Keep pressing 2 stoppers on Cassette holder and Press Cassette holder to the rear and remove it from Left and Right Side Plate (Fig. B3).

TOP VIEW

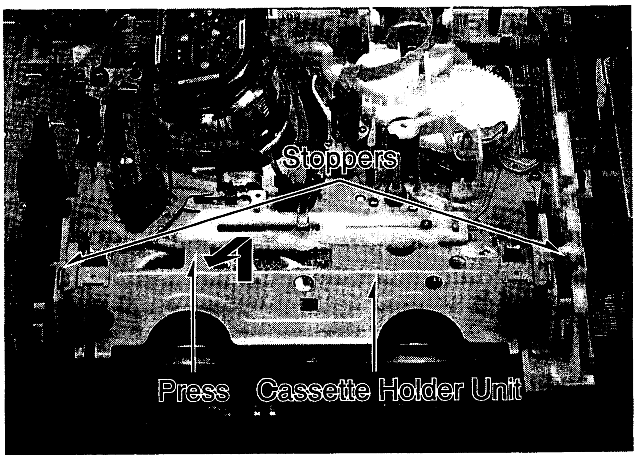

Stoppers
Press
Cassette Holder Unit

Fig. B3

(4) Remove Left and Right Side Plate

Remove connection spring of Drive gear.

Remove 3 red screws, 3 tabs and remove Left and Right Side Plate (Fig. B4, B5).

TOP VIEW

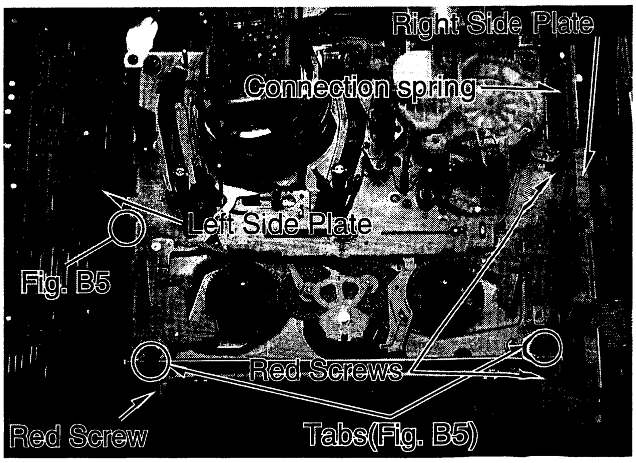

Right Side Plate
Connection spring
Left Side Plate
Fig. B5
Red Screws
Red Screw
Tabs(Fig. B5)

Fig. B4

TOP VIEW

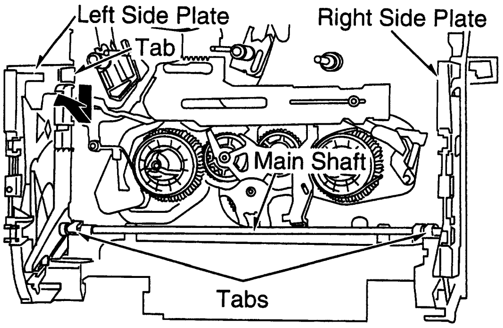

Left Side Plate
Tab
Right Side Plate
Main Shaft
Tabs

Fig. B5

(5) Remove Main shaft (Fig. B6)

TOP VIEW

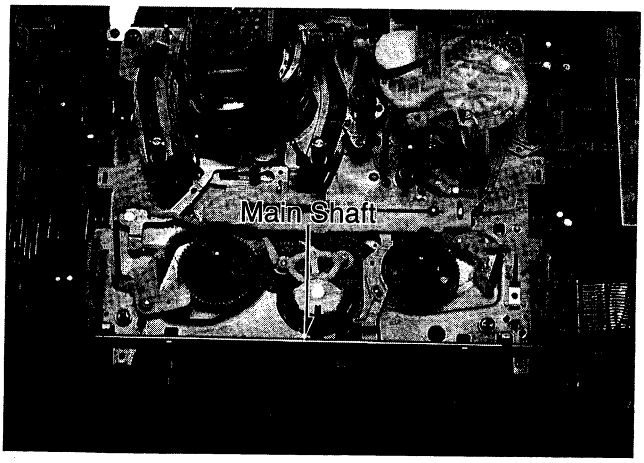


Fig. B6

3-2. Removal of Mechanism chassis

(1) Remove Mechanism chassis

Disconnect P3001, P2502 and P4002 (the connectors of Head amp C.B.A., Cylinder unit and A/C Head). Remove 5 screws (3 red screws and 2 gold screws) on Mechanism chassis and take out Mechanism chassis (Fig. B7).

TOP VIEW

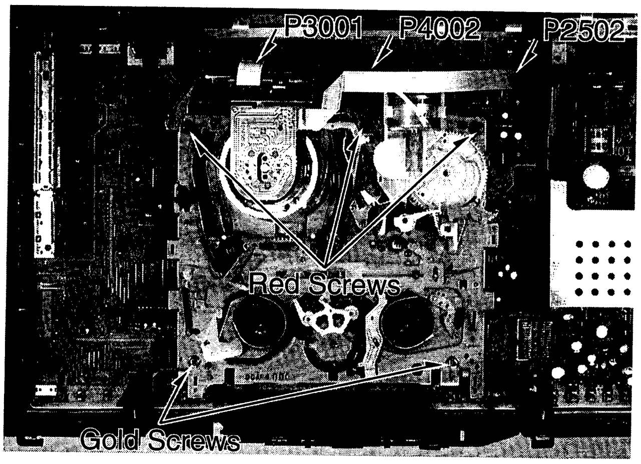

P3001
P4002
P2502
Red Screws
Gold Screws

Fig. B7

4. DISASSEMBLY/ASSEMBLY METHOD FOR MECHANISM

4-1. Disassembly of mechanism

1. Removal of Pinch arm

   Unlock the tab (opener piece). Remove Opener piece and Pinch arm (Fig. C1).
2. Removal of Loading motor unit

   Unlock 3 tabs and remove Loading motor unit (Fig. C1, C2).

   2 tabs of them located on the bottom of the Mechanism (Fig. C2).

TOP VIEW

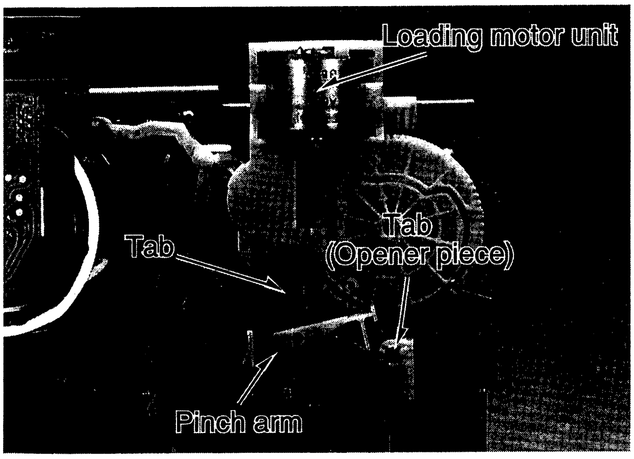

Loading motor unit
Tab
Tab
(Opener piece)
Pinch arm

Fig. C1

BOTTOM VIEW

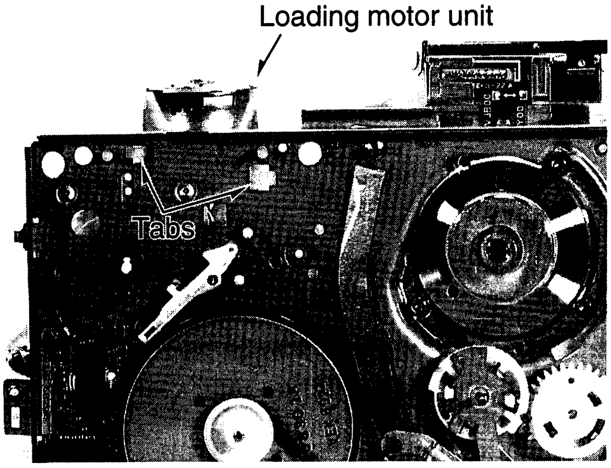

Loading motor unit
Tabs

Fig. C2

3. Removal of Main cam gear

   Remove Snap washer located on the bottom of Chassis by using retaining ring remover (Fig. C3) and remove Main cam gear (Fig. C4).

BOTTOM VIEW

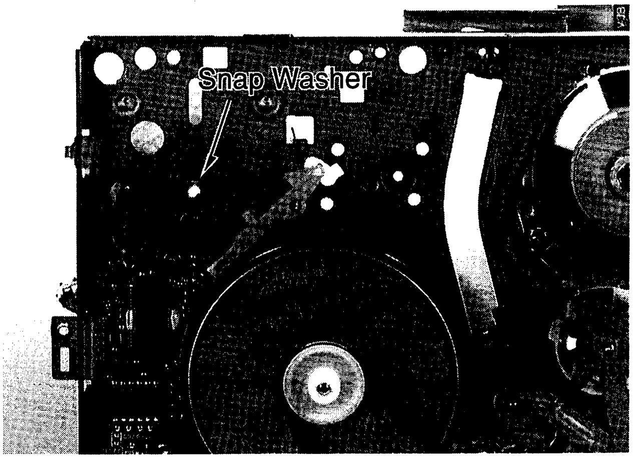

Snap Washer

Fig. C3

TOP VIEW

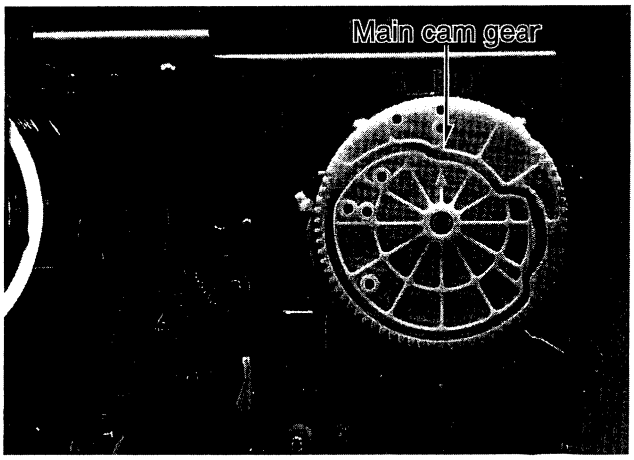

Main cam gear

Fig. C4

4. Removal of Drive rack arm
   Rotate Drive rack arm to the counterclockwise and remove it (Fig. C5).

TOP VIEW

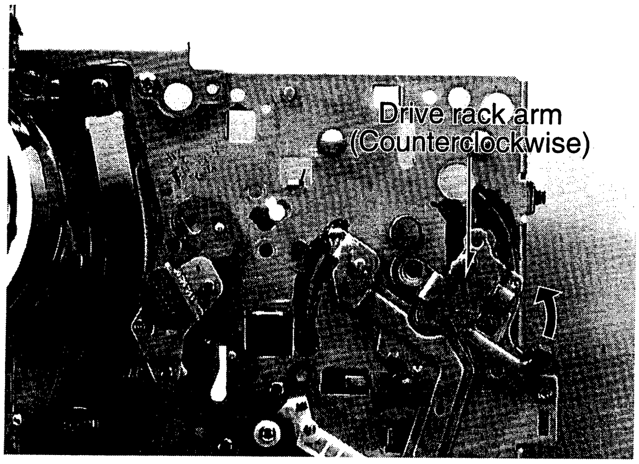

Drive rack arm
(Counterclockwise)

Fig. C5

5. Removal of Main lever, P5 arm and Conversion lever A
   Unlock 2 tabs of Prism LED and 1 tab on the projection of Chassis while keep lifting the left side of Main lever, and remove Main lever, P5 arm and Conversion lever A (Fig. C6).

※ It is easier to unlock the tabs by using a tweezer.

TOP VIEW

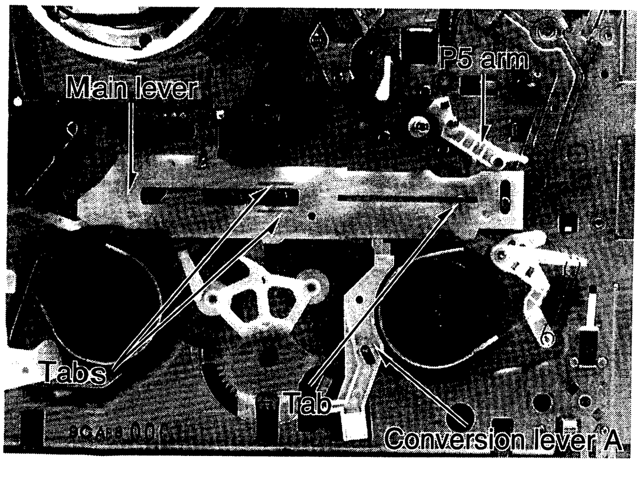

Main lever
P5 arm
Tabs
Tab
Conversion lever A

Fig. C6

6. Removal of Drive main lever arm
   Rotate Drive main lever arm to the counterclockwise and remove it (Fig. C7).

TOP VIEW

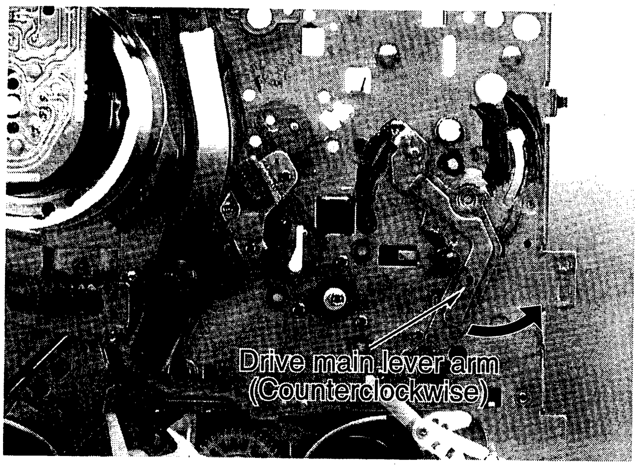

Drive main lever arm
(Counterclockwise)

Fig. C7

7. Removal of Tension arm unit and Supply reel table
   Remove Tension spring (Fig. C8). Unlock the tab of Tension arm projection on the bottom of Chassis (Fig. C9) and remove Tension arm unit and Supply reel table (Fig. C8).

※ When remove supply reel table, be sure whether a washer attaches on Supply reel table shaft (Fig. C10).

TOP VIEW

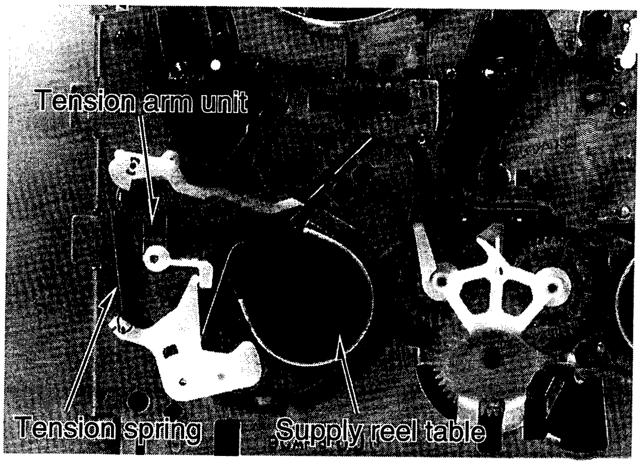

Tension arm unit
Tension spring
Supply reel table

Fig. C8

BOTTOM VIEW

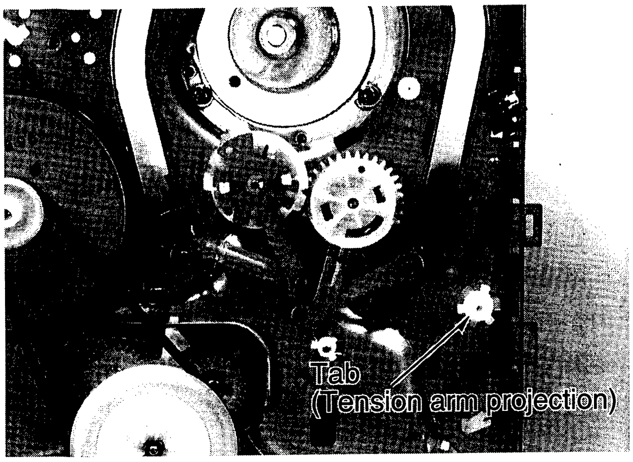

Tab
(Tension arm projection)

Fig. C9

SIDE VIEW

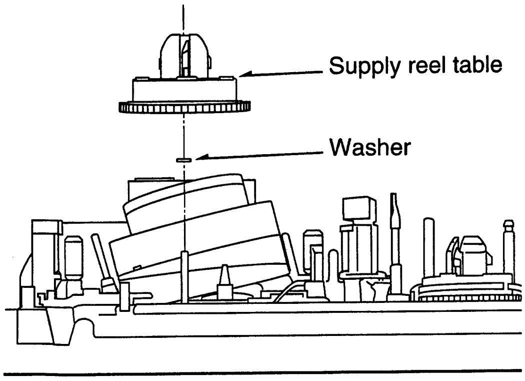

Supply reel table
Washer

Fig. C10

8. Remove of Take-up brake arm unit and Take-up reel table
   Unlock the tab of Take-up brake arm unit from the bottom of Chassis (Fig. C12). Remove Take-up brake arm unit and Take-up reel table (Fig. C11).

※ When remove Take-up reel table, be sure whether a washer attaches on Take-up reel table shaft (Fig. C13).

TOP VIEW

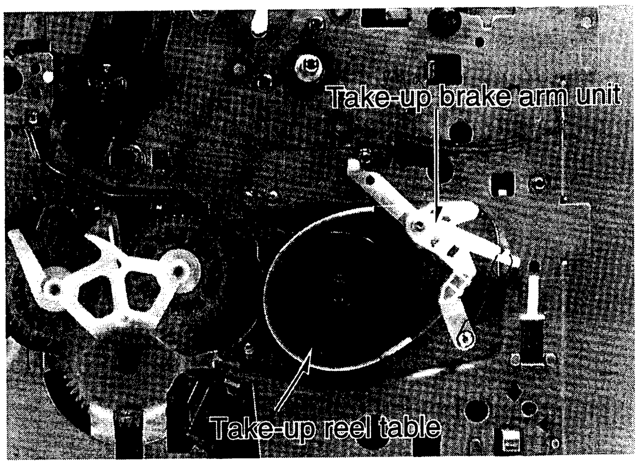

Take-up brake arm unit
Take-up reel table

Fig. C11

BOTTOM VIEW

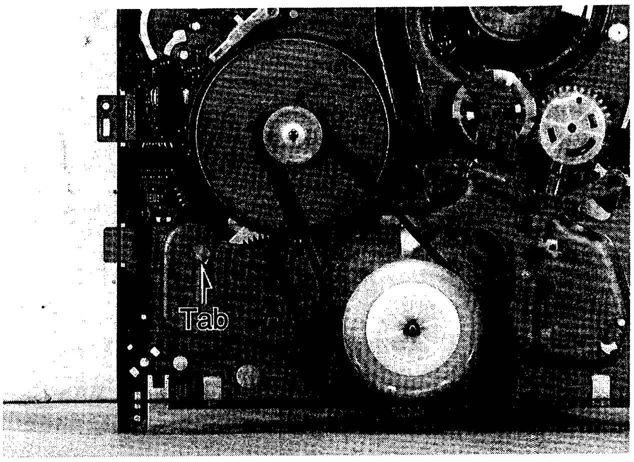


Fig. C12

SIDE VIEW

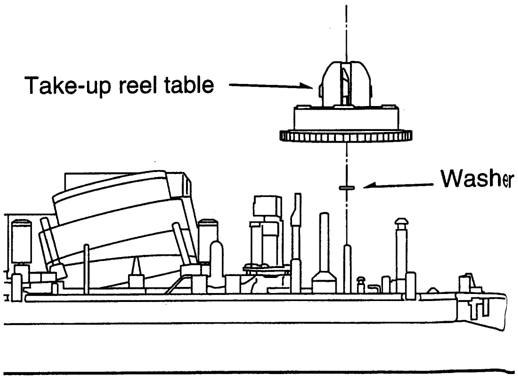

Take-up reel table
Washer

Fig. C13

9. Removal of Take-up & Supply loading arm
   Unlock the tab and remove Take-up and Supply loading arm (Fig. C14).

BOTTOM VIEW

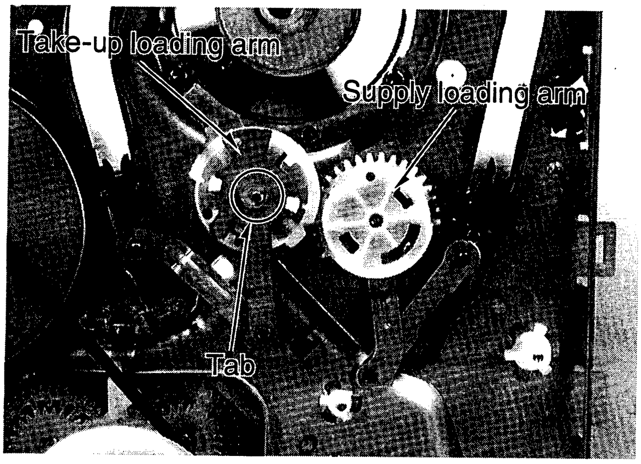

Take-up loading arm
Supply loading arm
Tab

Fig. C14

10. Removal of Prism LED, Take-up & Supply shaft holder and Loading rack
    Push the tab of Prism LED and remove Prism LED. Remove Take-up and Supply shaft holder from the groove of Chassis and remove Loading rack (Fig. C15).

TOP VIEW

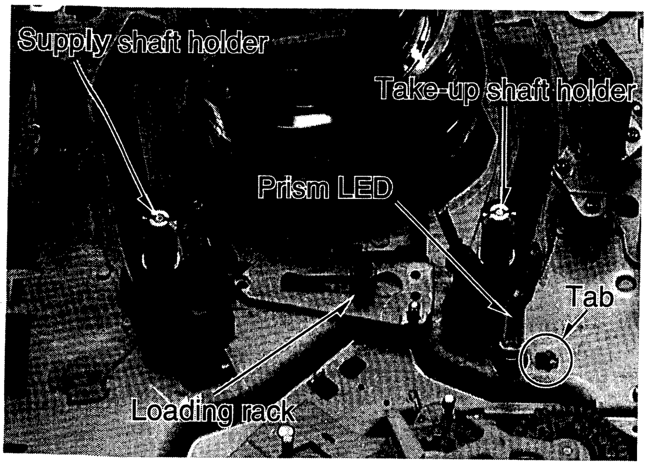

Supply shaft holder
Take-up shaft holder
Prism LED
Tab
Loading rack

Fig. C15

11. Removal of Center clutch, Conversion gear spring, Conversion gear, Conversion lever B and Idler arm unit
    Remove the Belt and the Cut washer (Fig. C16).
    Remove Center clutch (Fig. C16), Conversion gear spring, Conversion gear, Conversion lever B and Idler arm unit (Fig. C17).

※ Pay an attention of Conversion gear spring during the removal.

BOTTOM VIEW

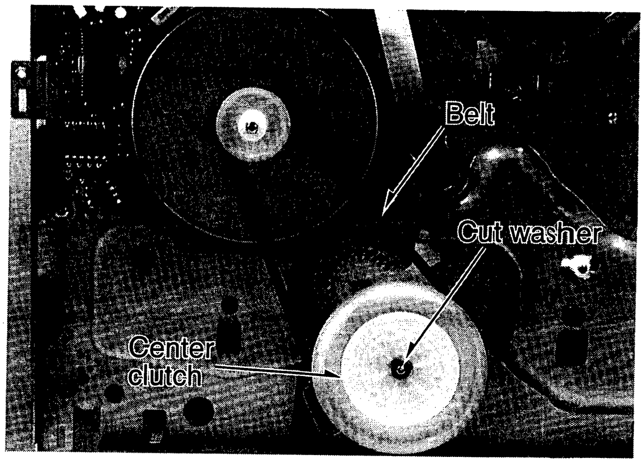

Belt
Cut washer
Center clutch

Fig. C16

BOTTOM VIEW

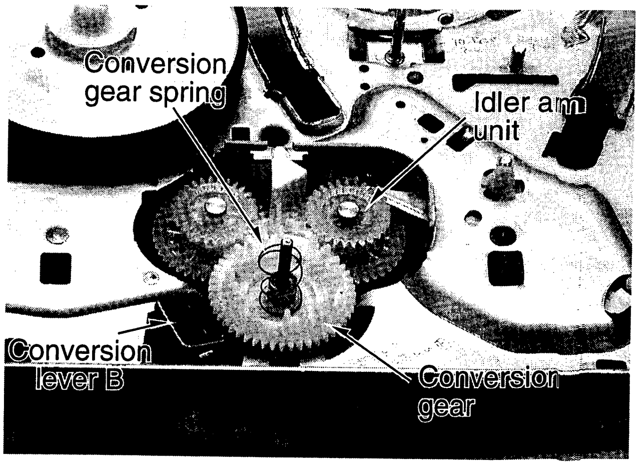

Conversion gear spring
Idler arm unit
Conversion lever B
Conversion gear

Fig. C17

12. Removal of Capstan unit

Remove 3 gold screws (Fig. C18).

Remove 2 gold screws on the bottom of Chassis (Fig. C19).

Keep moving SS brake arm and remove Capstan unit.

TOP VIEW

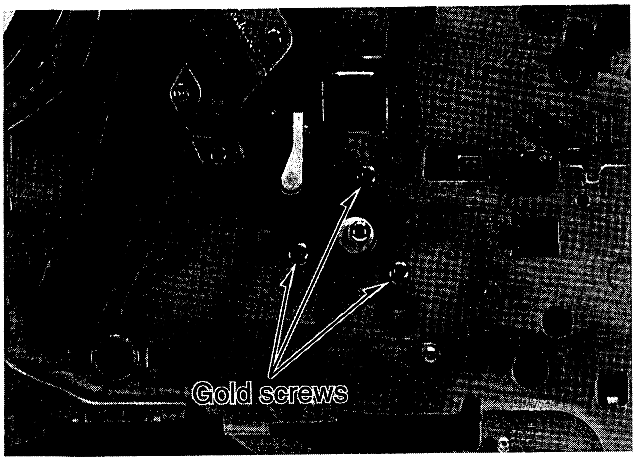

Gold screws

Fig. C18

BOTTOM VIEW

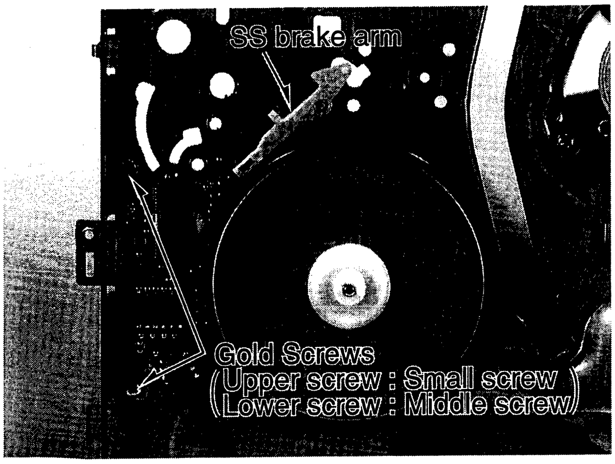

SS brake arm
Gold Screws
(Upper screw : Small screw
Lower screw : Middle screw)

Fig. C19

13. Removal of Cylinder unit

Remove red screw (Fig. C20).

Remove 3 gold screws on the bottom of Chassis and remove Cylinder unit (Fig. C21).

TOP VIEW

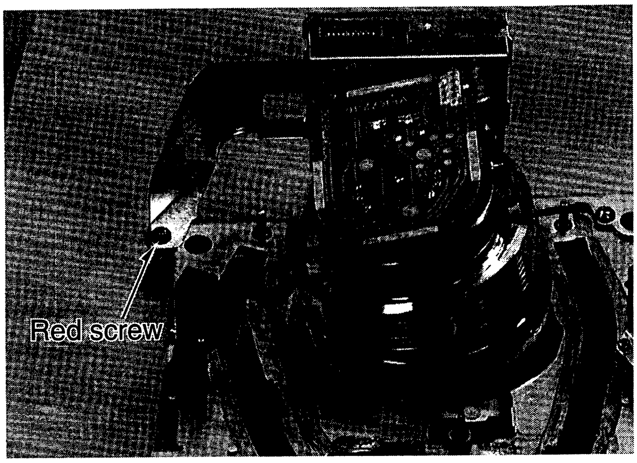


Fig. C20

BOTTOM VIEW

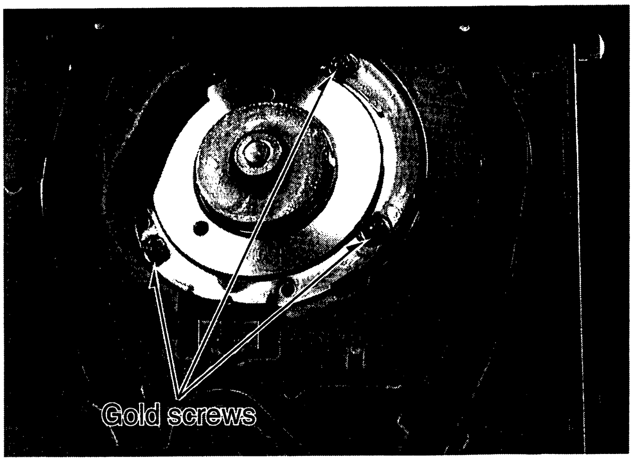

Gold screws

Fig. C21

4-2. Assembly and phase adjustment of mechanism

The gear phase alignment has been performed in the EJECT position and it is crucial for the Z Mechanism to operate correctly.

NOTE: In case of the parts replacement like Position switch, Mechanism position should be set to Eject position in order to fit the phase of Position switch.

1. Assembly and phase adjustment of Mechanism

(1) Assembly of Cylinder unit

Cylinder unit should be fixed by 3 screws (GOLD) from the bottom side of Mechanism chassis and red screw on the top side of Mechanism Chassis (Fig. E1, E2).

BOTTOM VIEW

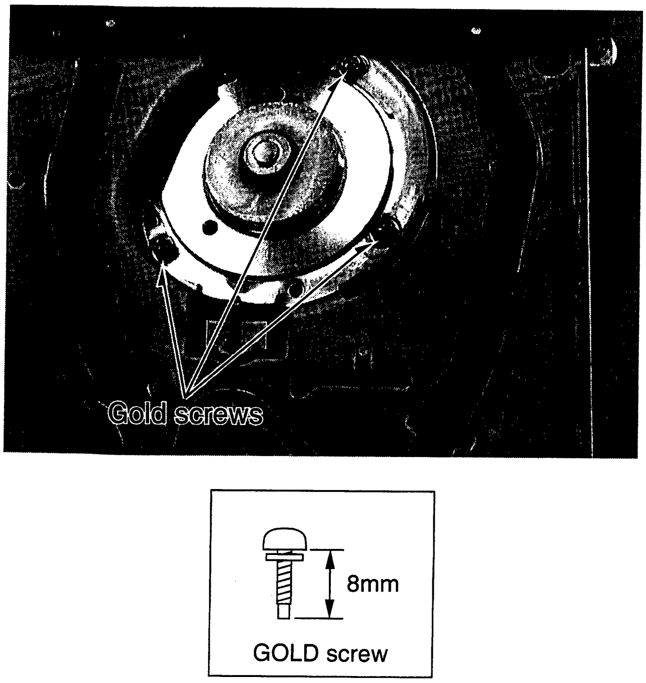

Gold screws
8mm
GOLD screw

Fig. E1

TOP VIEW

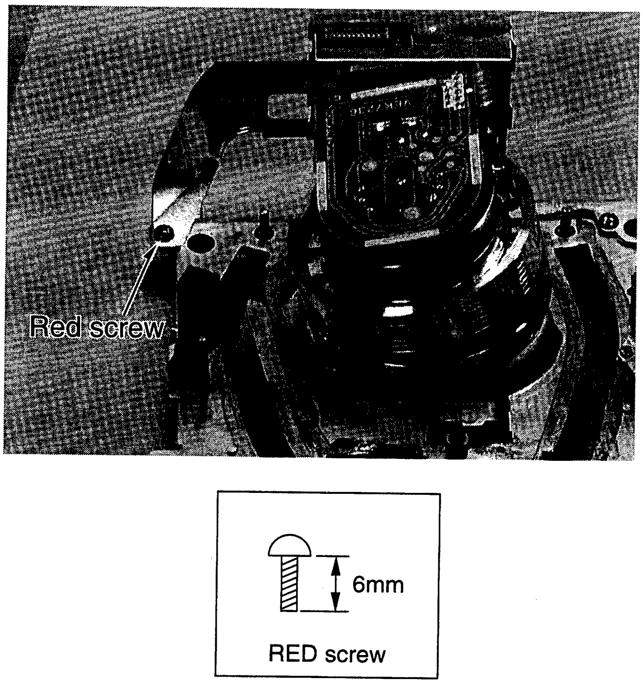

Red screw
6mm
RED screw

Fig. E2

(2) Assembly of Capstan unit

Move SS brake arm in the direction of arrow (see Fig. E3) and capstan unit should be fixed by 2 screws (GOLD) on the bottom side of Mechanism chassis and 3 screws (GOLD) on the top of Mechanism chassis (Fig. E3, E4).

BOTTOM VIEW

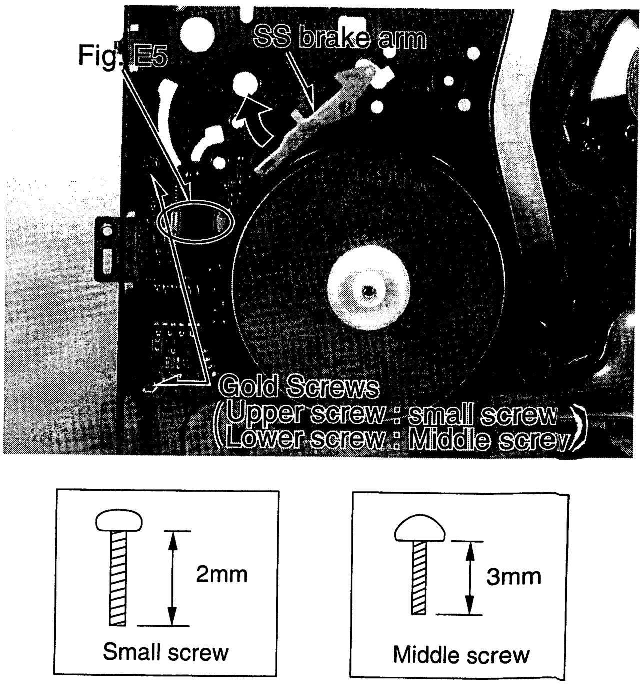
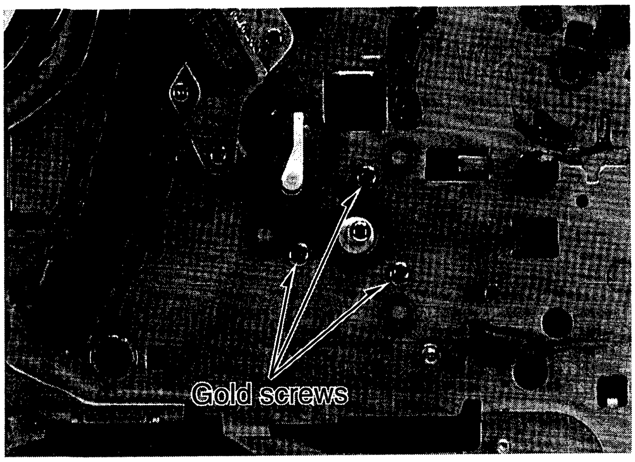


Fig. E5
SS brake arm
Gold Screws
(Upper screw : small screw
Lower screw : Middle screw)
2mm
Small screw
3mm
Middle screw

Fig. E3

TOP VIEW



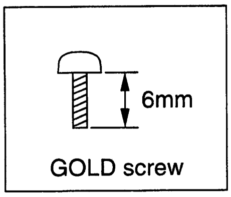


Fig. E4

NOTE: Replacement of Capstan unit and Procedure of applying the silicone grease.

REPLACEMENT OF CAPSTAN UNIT

In case of replacement of the Capstan Unit the Silicone grease have to be applied between the Mechanism chassis and the Drive IC by the following procedure.

Silicone grease No. VFK1301 for radiation of the Drive IC

Silicone grease is used for the radiation of the Drive IC. The heat occurred on the IC is radiated to the Mechanism chassis through the grease. In case of the incomplete radiation, the safety circuit operates depending on the rise of the temperature and it possibility stop the operation of the Drive IC.

PROCEDURE OF APPLYING THE SILICONE GREASE

① There is a cut-out part at the Drive IC mounting position and the bottom of the IC can be seen from the cut-out part. Apply the Silicon grease to whole the cut-out part of IC as shown in Fig. E5-1 so that the grease is piled 0.3–0.5 mm from the surface of the C.B.A.

② Next, from the component side of the C.B.A., apply the Silicon grease so that the grease is piled at the metal of the center of the IC as shown in Fig. E5-2.

SIDE VIEW

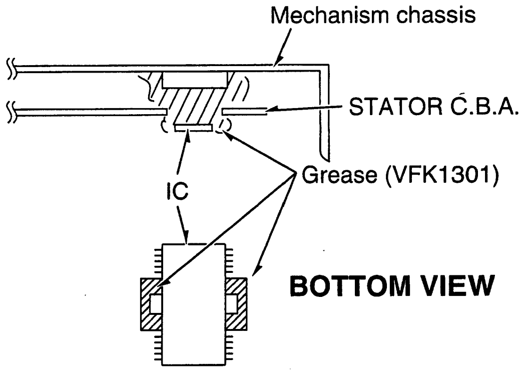


Fig. E5

TOP VIEW

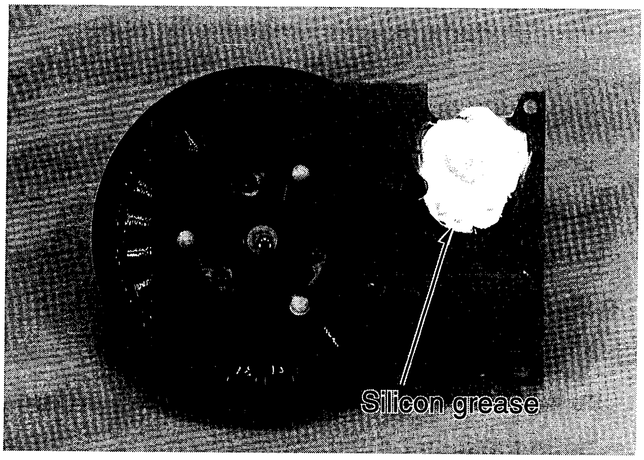

Silicon grease

Fig. E5-1

Fig. E5-1. Apply the Silicon grease so that the grease is piled 0.3–0.5 mm from the surface of the C.B.A.

BOTTOM VIEW

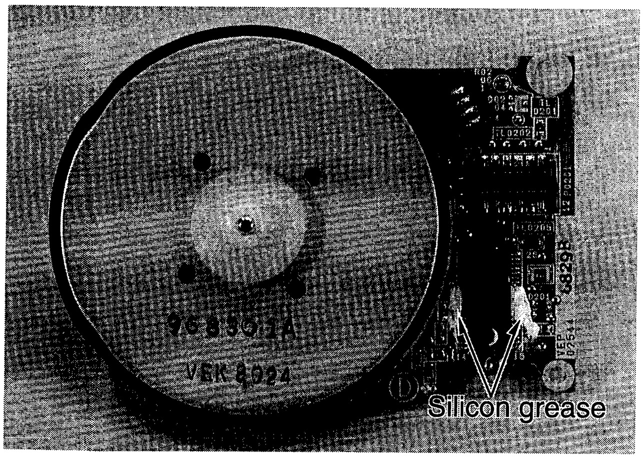

①
Silicon grease

Fig. E5-2

Fig. E5-2. Apply the Silicon grease at the metal of the center of the IC.

(3) Assembly of Idler arm unit, Conversion lever B, Conversion gear, Conversion gear spring and Center clutch

Put above parts together in the following order and fix them by Cut washer (Fig. E6), and install Capstan belt.

① Idler arm unit

② Conversion lever B

③ Conversion gear

④ Conversion gear spring

⑤ Center clutch

BOTTOM VIEW

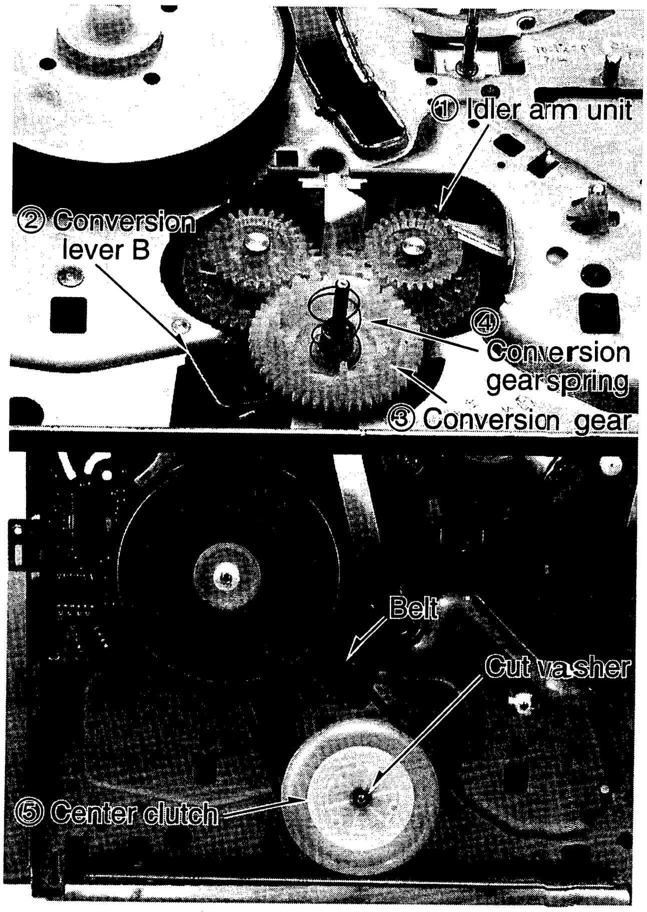

① Idler arm unit
② Conversion lever B
④ Conversion gear spring
③ Conversion gear
Belt
Cut washer
⑤ Center clutch

Fig. E6

(4) Assembly of Loading rack, Take-up & Supply shaft holder and Prism LED

Adjust the phase between the hole of Loading rack position fixture and the penetration hole of Chassis. Install Take-up and Supply shaft holder so that Take-up and Supply shaft holder fits the groove of Chassis.

Put Prism LED together (Fig. E7).

TOP VIEW

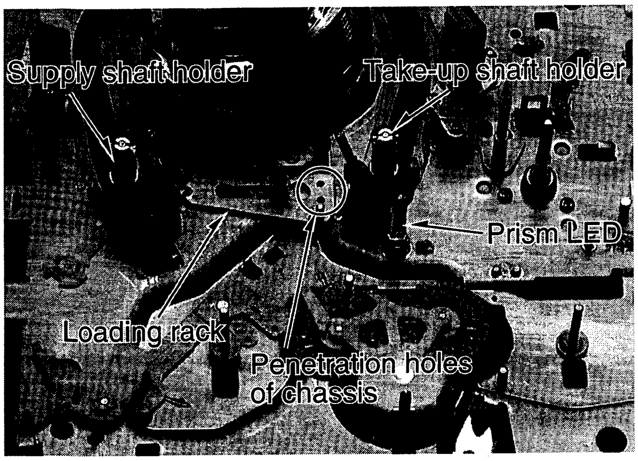

Supply shaft holder
Take-up shaft holder
Prism LED
Loading rack
Penetration holes of chassis

Fig. E7

(5) Assembly of Take-up and Supply Loading arm

Move Shaft holder to the unloading position. Adjust the phase of Take-up and Supply loading arm and insert the arm to the shaft (Fig. E8).

BOTTOM VIEW

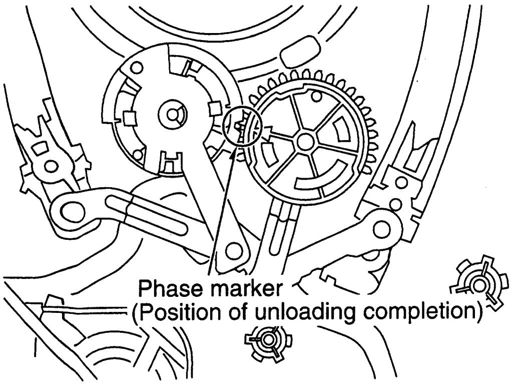

Phase marker
(Position of unloading completion)

Fig. E8

(6) Assembly of Take-up reel table and Take-up brake arm unit

Put washer, (Fig. E10) Take-up reel table and Take-up brake arm unit together (Fig. E9).

NOTE: The shape between portion A for Take-up reel table and portion B for Supply reel table is different.

Therefore, confirm the shape of portion A and B before mounting reel tables. If Take-up reel table has been confused with Supply reel table and they have been installed, the trouble of reel table rotation slip happens (Fig. E11).

TOP VIEW

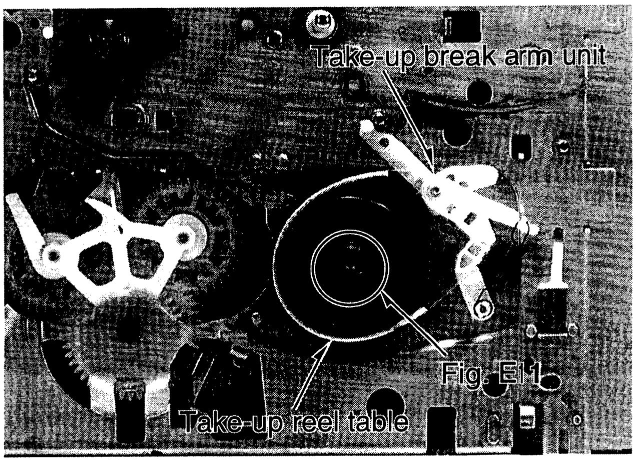

Take-up break arm unit
Fig. E11
Take-up reel table

Fig. E9

SIDE VIEW

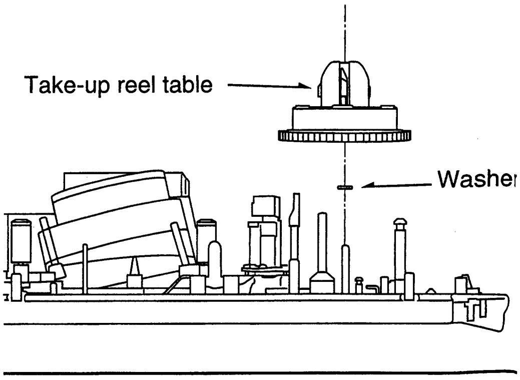

Take-up reel table
Washer

Fig. E10

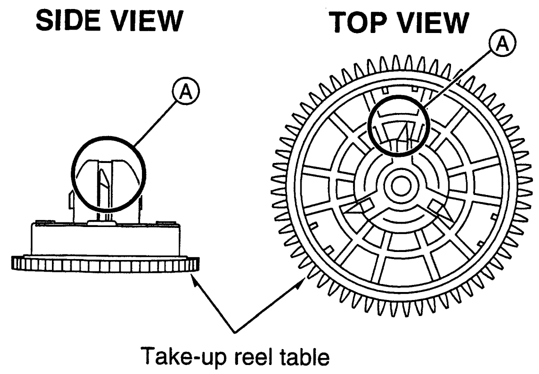

SIDE VIEW
TOP VIEW
Ⓐ
Ⓐ
Take-up reel table

Fig. E11

(7) Assembly of Supply reel table and Tension arm unit

Install washer (Fig. E13) and Supply reel table. Insert Tension arm unit to Tension arm projection and hang Tension spring with Supply spring arm projection (Fig. E12).

※1 Pay an attention of Position of the Supply spring arm.

NOTE: The shape between portion A for Take-up reel table and portion B for Supply reel table is different.

Therefore, confirm the shape of portion A and B before mounting reel tables. If Take-up reel table has been confused with Supply reel table and they have been installed, the trouble of reel table rotation slip happens (Fig. E14).

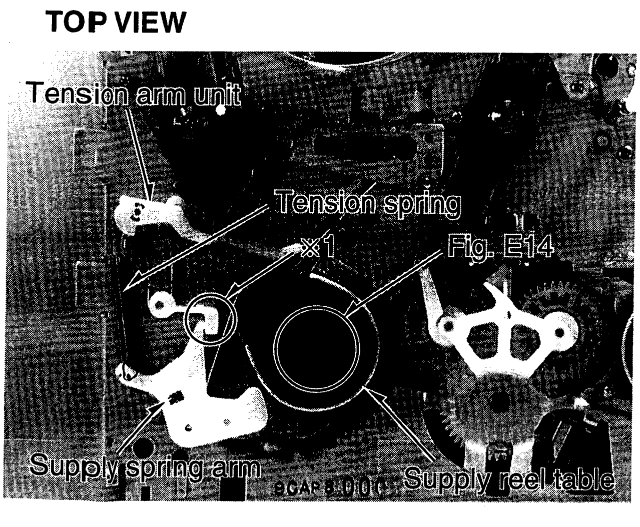

TOP VIEW
Tension arm unit
Tension spring
※1
Fig. E14
Supply spring arm
Supply reel table

Fig. E12

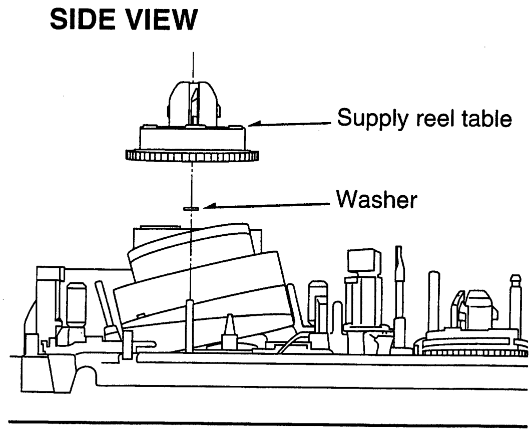

SIDE VIEW
Supply reel table
Washer

Fig. E13

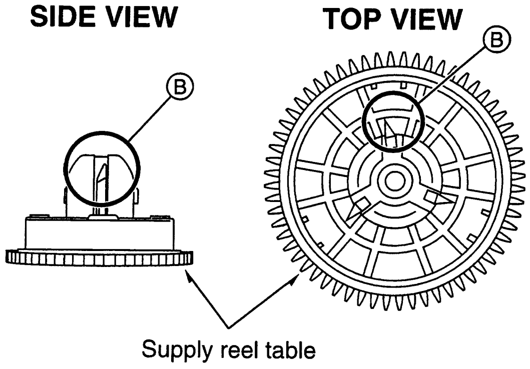

SIDE VIEW
TOP VIEW
Ⓑ
Ⓑ
Supply reel table

Fig. E14

(8) Assembly of Drive main lever arm

Install Drive main lever arm so that Drive main lever arm fits to the groove of Chassis.

And rotate Drive main lever arm to the clockwise in order to adjust the phase between the hole of the position fixture and the penetration hole of Chassis (Fig. E15).

TOP VIEW

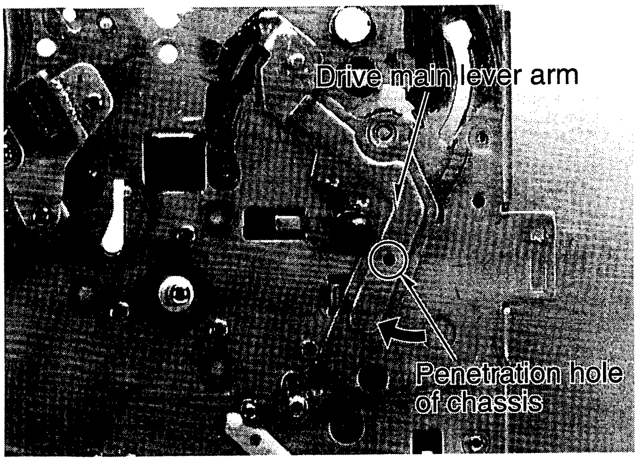

Drive main lever arm
Penetration hole of chassis

Fig. E15

(9) Assembly of Conversion lever A, P5 arm and Main lever

Install Conversion lever A and P5 arm (Fig. E16, E17).

Adjust the phase of Main lever so that Main lever fits the projection of Loading rack.

Main lever has to be locked at the projection of Chassis by 1 tab, and 2 tabs of Prism LED (Fig. E16).

※ Conversion lever A, P5 arm, Supply brake arm unit and the projection of Take-up brake arm have to be installed to the groove under the Main lever (Fig. E18).

TOP VIEW

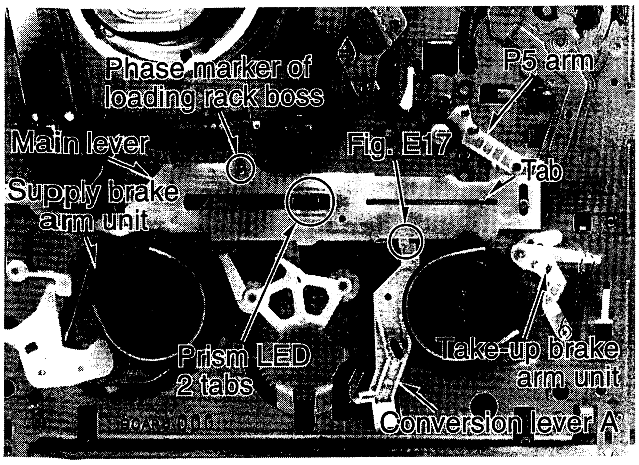

Phase marker of loading rack boss
P5 arm
Main lever
Fig. E17
Tab
Supply brake arm unit
Prism LED 2 tabs
Take-up brake arm unit
Conversion lever A

Fig. E16

TOP VIEW

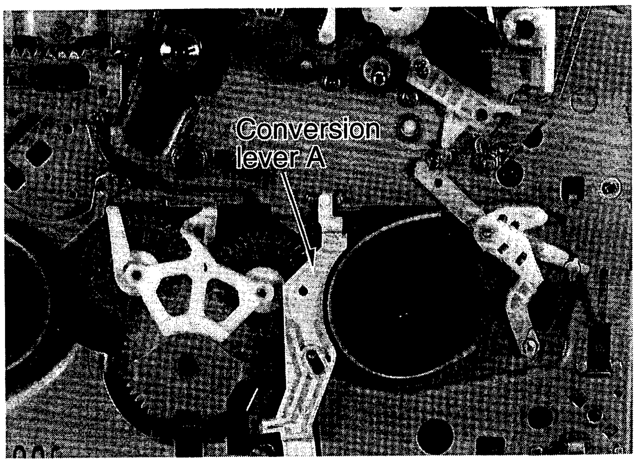

Conversion lever A

Fig. E17

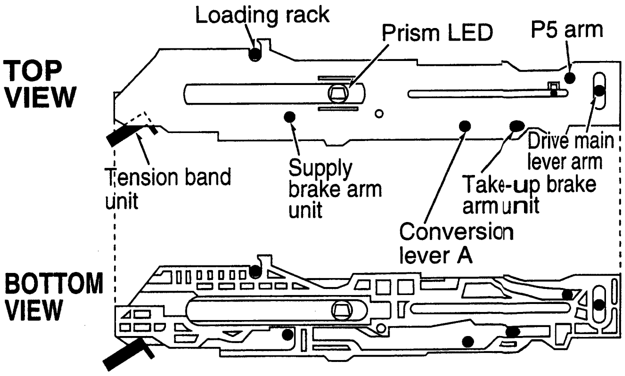

TOP VIEW
Loading rack
Prism LED
P5 arm
Drive main lever arm
Tension band unit
Supply brake arm unit
Take-up brake arm unit
Conversion lever A
BOTTOM VIEW

Fig. E18

(10) Assembly of Drive rack arm

Install Drive rack arm so that Drive rack arm fits the groove of Chassis and rotate it to the clockwise in order to fit the penetration hole of Chassis (Fig. E19).

TOP VIEW

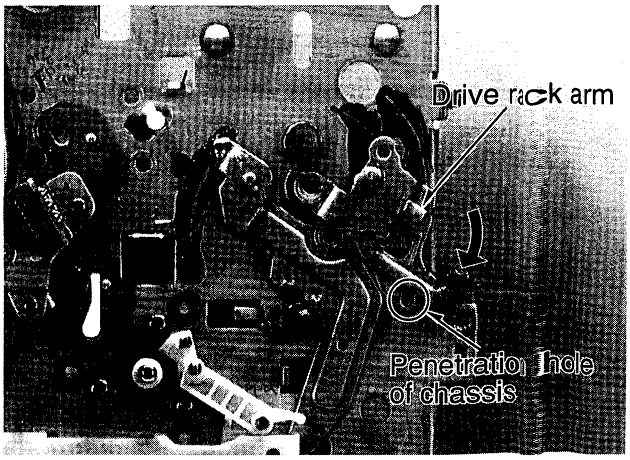

Drive rack arm
Penetration hole of chassis

Fig. E19

(11) Assembly of Main cam gear

Install Main cam gear so that Main cam gear fits the penetration hole of Chassis (Fig. E20) and fix it by the snap washer from the bottom of Chassis (Fig. E21).

TOP VIEW

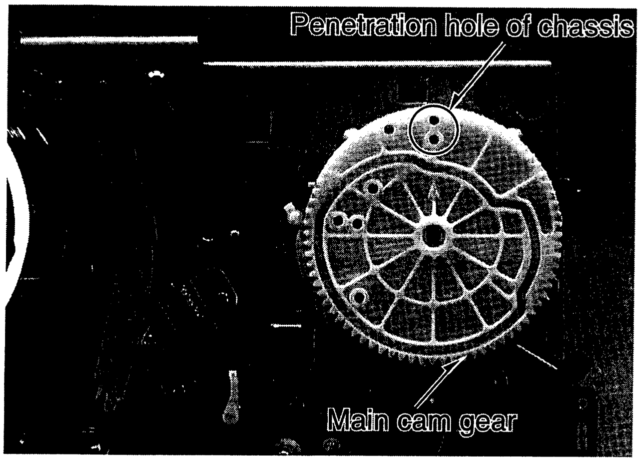

Penetration hole of chassis
Main cam gear

Fig. E20

BOTTOM VIEW

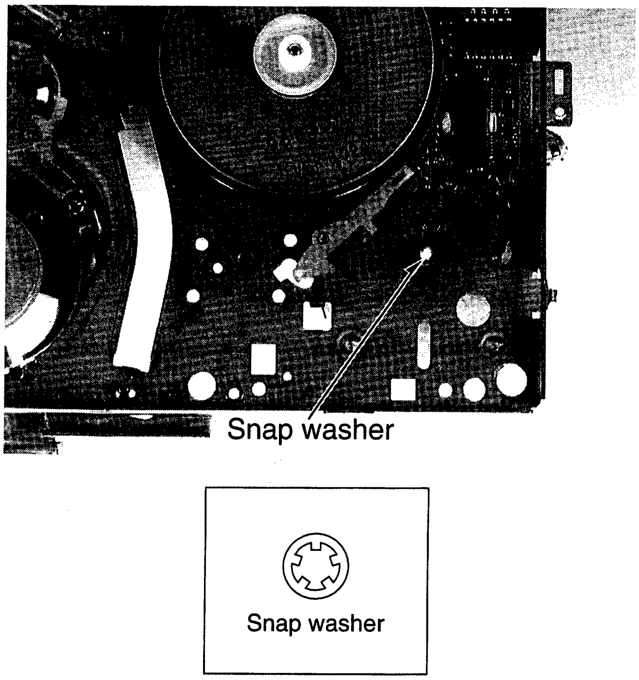

Snap washer
Snap washer

Fig. E21

(12) Assembly of Loading motor unit

Install Loading motor unit so that Loading motor unit fits the groove of Chassis (Fig. E22).

(13) Assembly of Pinch arm

Put Pinch arm together and install Opener piece to fix Pinch arm (Fig. E22).

TOP VIEW

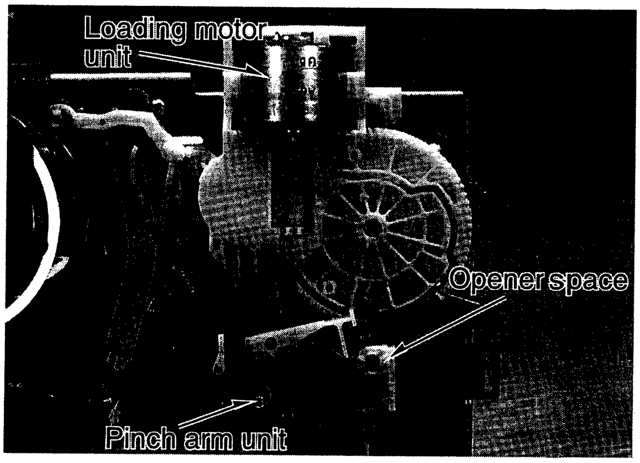

Loading motor unit
Opener space
Pinch arm unit

Fig. E22

4-3. Assembly of mechanism chassis

1. Assembly of Mechanism chassis

(1) Adjust the phase of Position switch in Main C.B.A..

Rotate Position switch until the click point. The projection of Position switch should be set to just above (Fig. F1).

TOP VIEW

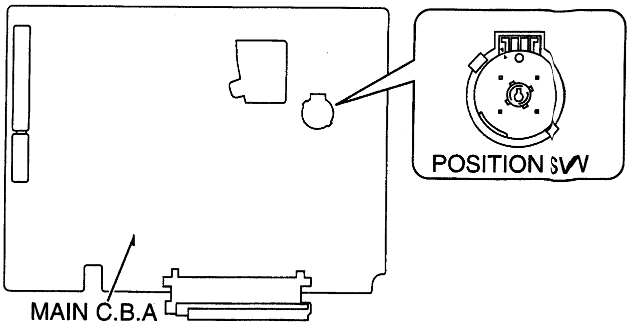

POSITION SW
MAIN C.B.A

Fig. F1

(2) Assembly of Mechanism chassis

Put Mechanism chassis on Main C.B.A. and fix it by 5 screws (3 red screws and 2 gold screws). Connect P3001, P2502 and P4002 (Fig. F2).

TOP VIEW

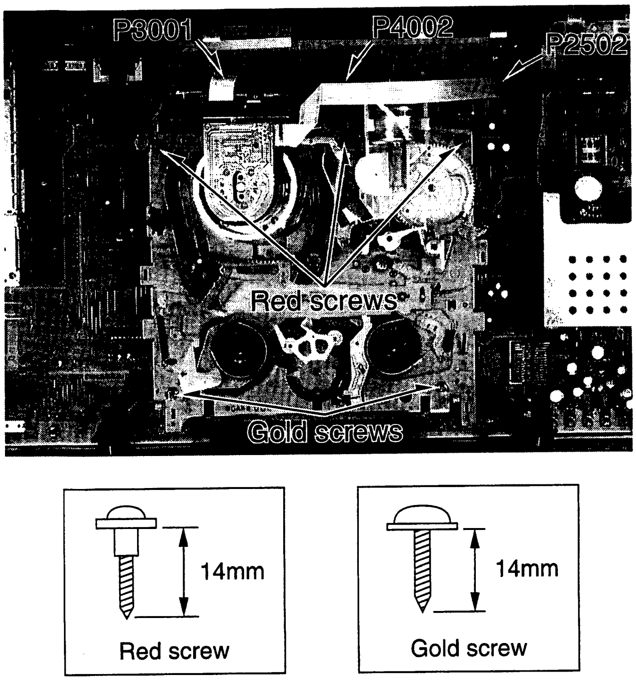

P3001
P4002
P2502
Red screws
Gold screws
14mm
Red screw
14mm
Gold screw

Fig. F2

※ The red screws has a gap among the chassis. Therefore be careful not to tighten too much.

2. Assembly of Cassette holder unit

(1) Assembly of Main shaft

Install Main shaft so that Main shaft fits the groove of Chassis (Fig. F3).

TOP VIEW

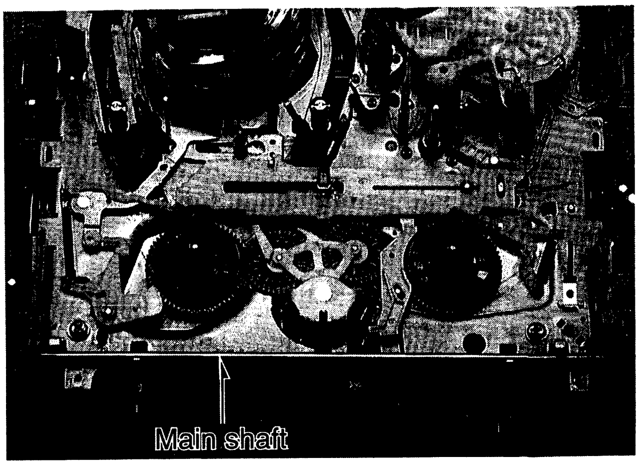


Fig. F3

(2) Assembly of Left & Right side plate

Install Left side plate so that Left side plate fits the groove of Chassis and fix it by the red screws.

After adjustment the phase of waper arm and Drive rack (Fig. F5), install Right side plate so that Right side plate fits the groove of Chassis and fix it by 2 red screws. Hang connection spring on the projection of Drive rack arm (Fig. F4, F5).

TOP VIEW

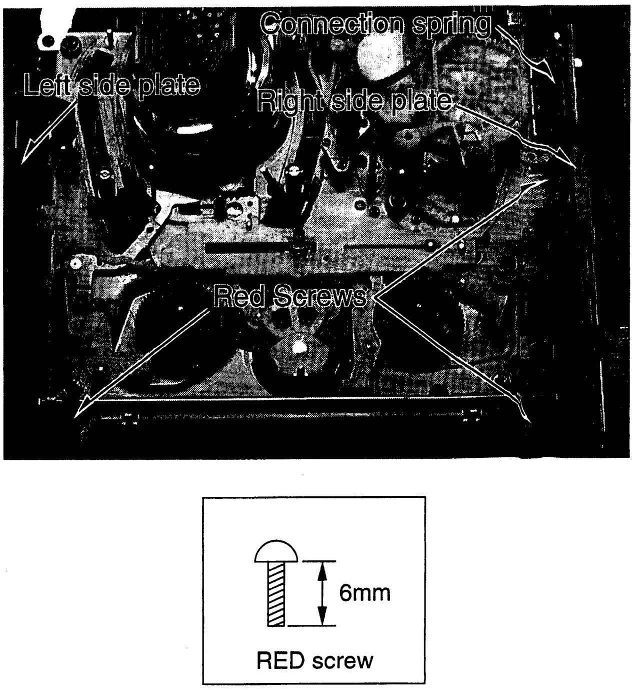

Connection spring
Left side plate
Right side plate
Red Screws
6mm
RED screw

Fig. F4

SIDE VIEW

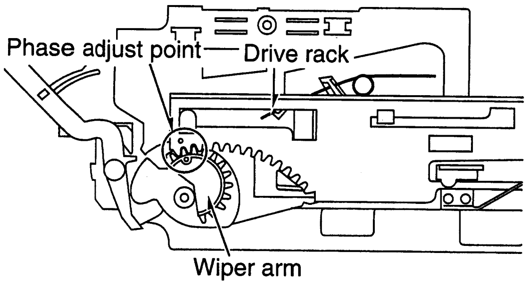

Phase adjust point
Drive rack
Wiper arm

Fig. F5

TOP VIEW

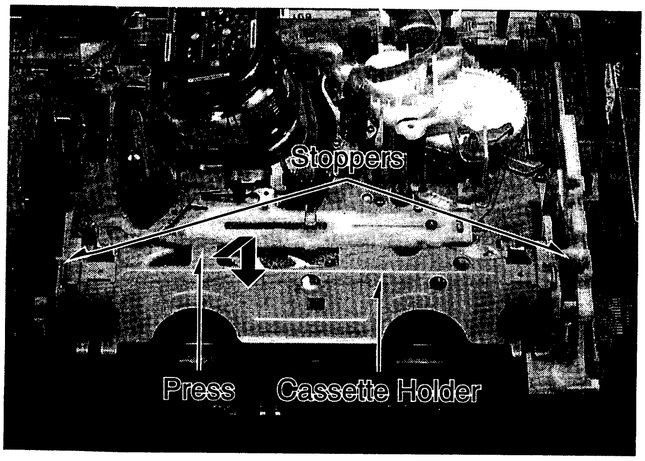

Stoppers
Press
Cassette Holder

Fig. F6

(3) Assembly of Cassette holder
Install Cassette holder so that Cassette holder fits the groove of Waper arm installed in Main shaft (Fig. F6, F7).

TOP VIEW

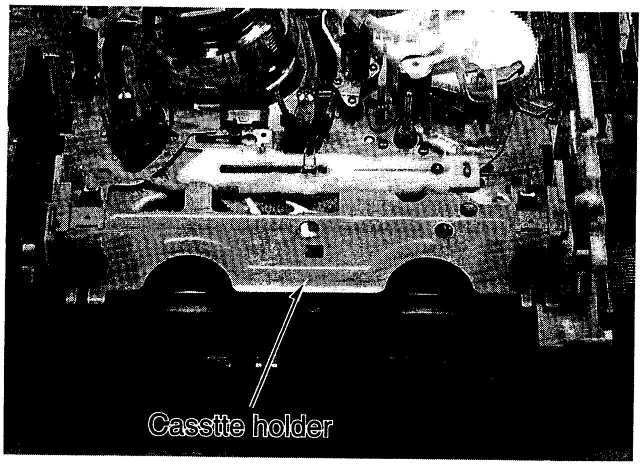

Casstte holder

Fig. F7

(4) Assembly of Top plate
Install Top plate so that Top plate fits the groove of Left and Right side plate.

※ Fix Top plate by tightening screw when the tabs of Left and Right side plate broke (Fig. F8).

TOP VIEW

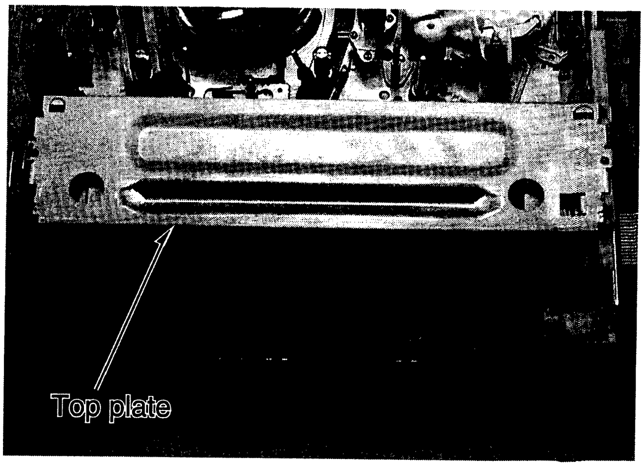
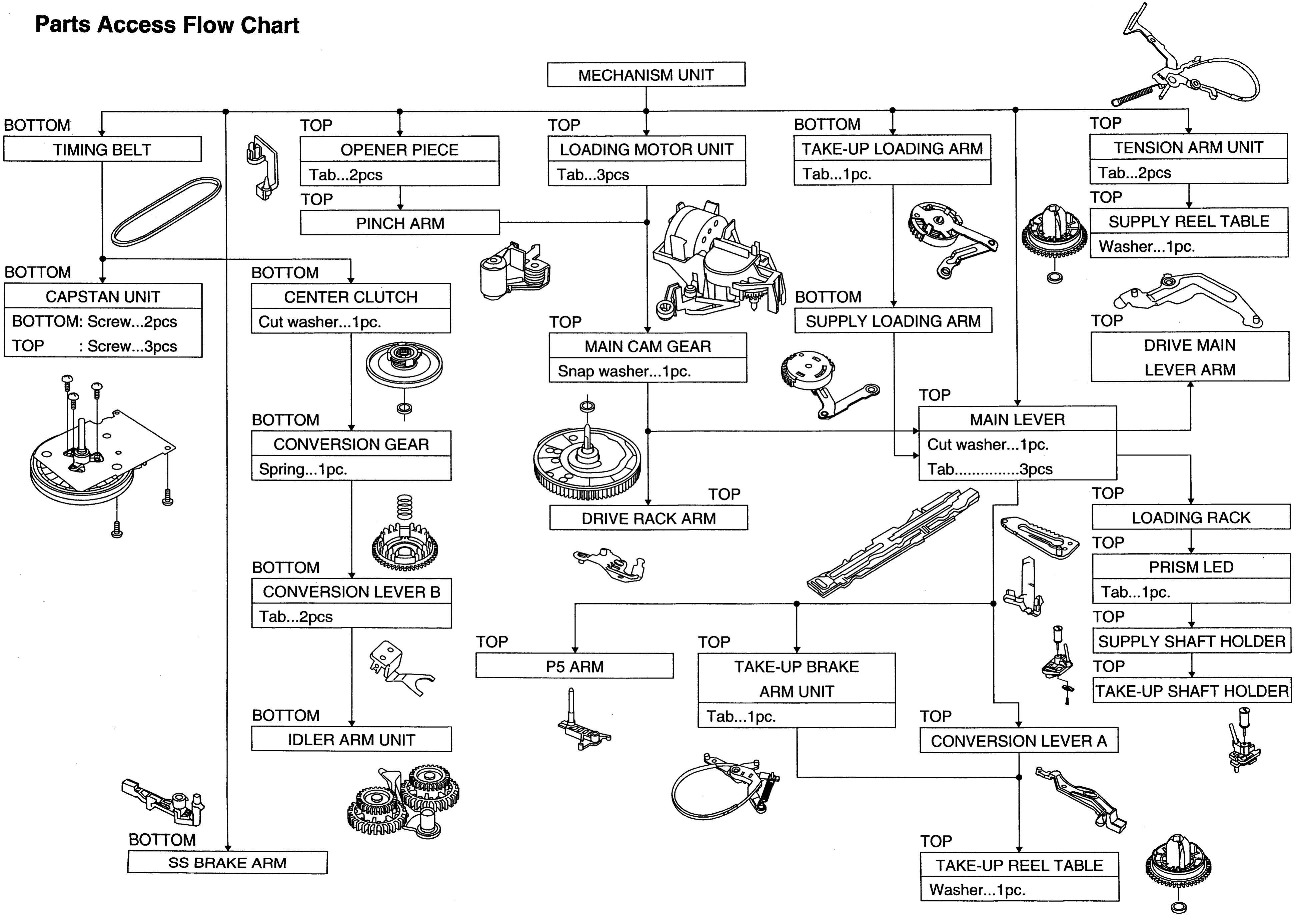


Fig. F8

(5) Install Front panel unit and Top panel

Parts Access Flow Chart


MECHANISM UNIT
BOTTOM
TIMING BELT
TOP
OPENER PIECE
Tab...2pcs
TOP
PINCH ARM
TOP
LOADING MOTOR UNIT
Tab...3pcs
BOTTOM
TAKE-UP LOADING ARM
Tab...1pc.
TOP
TENSION ARM UNIT
Tab...2pcs
TOP
SUPPLY REEL TABLE
Washer...1pc.
BOTTOM
CAPSTAN UNIT
BOTTOM: Screw...2pcs
TOP : Screw...3pcs
BOTTOM
CENTER CLUTCH
Cut washer...1pc.
BOTTOM
SUPPLY LOADING ARM
TOP
DRIVE MAIN LEVER ARM
TOP
MAIN CAM GEAR
Snap washer...1pc.
TOP
MAIN LEVER
Cut washer...1pc.
Tab...............3pcs
BOTTOM
CONVERSION GEAR
Spring...1pc.
TOP
DRIVE RACK ARM
TOP
LOADING RACK
TOP
PRISM LED
Tab...1pc.
BOTTOM
CONVERSION LEVER B
Tab...2pcs
TOP
P5 ARM
TOP
TAKE-UP BRAKE ARM UNIT
Tab...1pc.
TOP
SUPPLY SHAFT HOLDER
TOP
TAKE-UP SHAFT HOLDER
BOTTOM
IDLER ARM UNIT
TOP
CONVERSION LEVER A
BOTTOM
SS BRAKE ARM
TOP
TAKE-UP REEL TABLE
Washer...1pc.

5. MECHANICAL ADJUSTMENT PROCEDURE

5-1. Tension post position adjustment

Equipment required: Hex. Wrench (VFK0326)
Specification: 50.5±1.5 mm

(1) Disconnect the AC plug.
(2) Remove the TOP PLATE.
(3) Turn the LOADING MOTOR until the loading completes.
(4) Adjust the hole of Tension Band Fastener by Hex Wrench until the distance between the Tension Post and the center of Supply reel table is 50.5±1.5 mm as shown in Fig. M1.

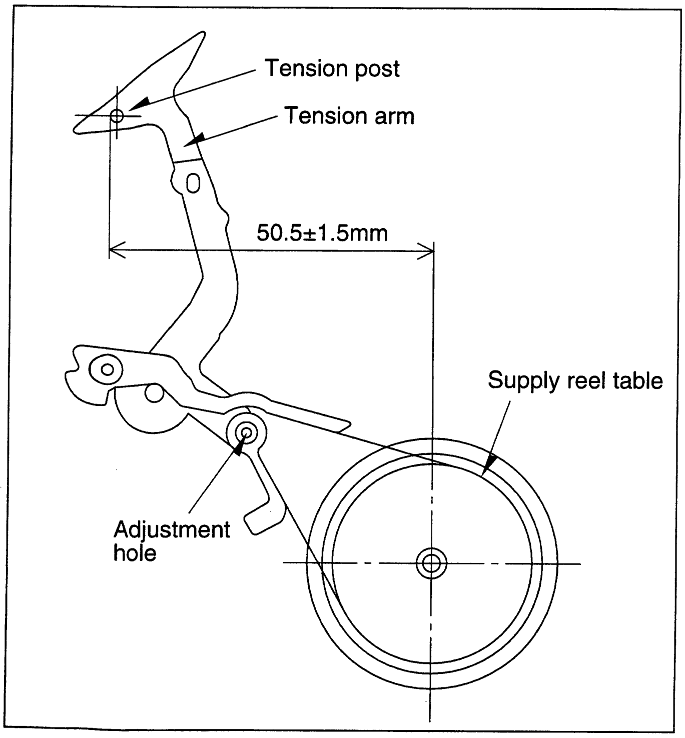

Tension post
Tension arm
50.5±1.5mm
Supply reel table
Adjustment hole

Fig. M1

5-2. Back tension adjustment

Equipment required:
Back Tension Meter (VFK0132)
VHS Cassette tape (180 minutes tape: PAL)
VHS Cassette tape (120 minutes tape: NTSC)
Specification: 22.5–27.5g

(1) Playback the cassette tape from the beginning and wait until the tape movement get the stabilization. (for approx. 10–20 seconds)
(2) Insert the Back Tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig. M2.

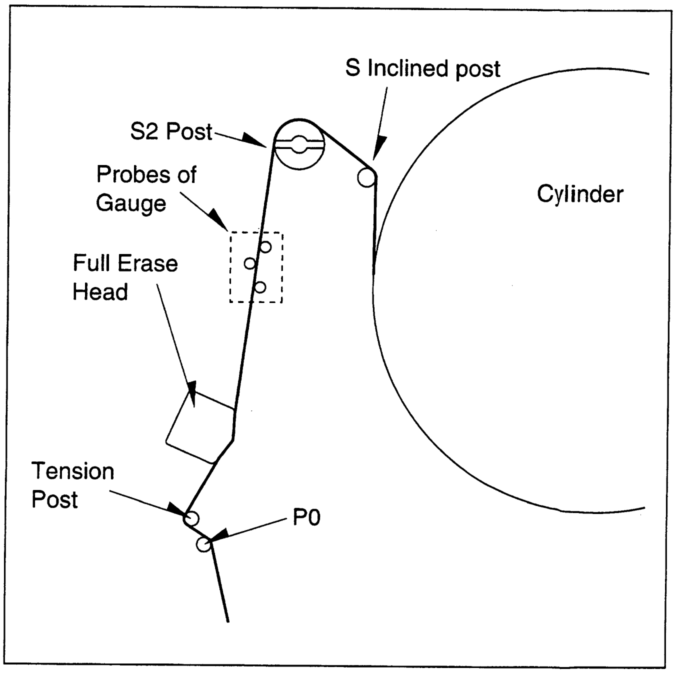

S Inclined post
S2 Post
Probes of Gauge
Cylinder
Full Erase Head
Tension Post
P0

Fig. M2

(3) If it is out of specification, change the spring notch as shown in Fig. M3.

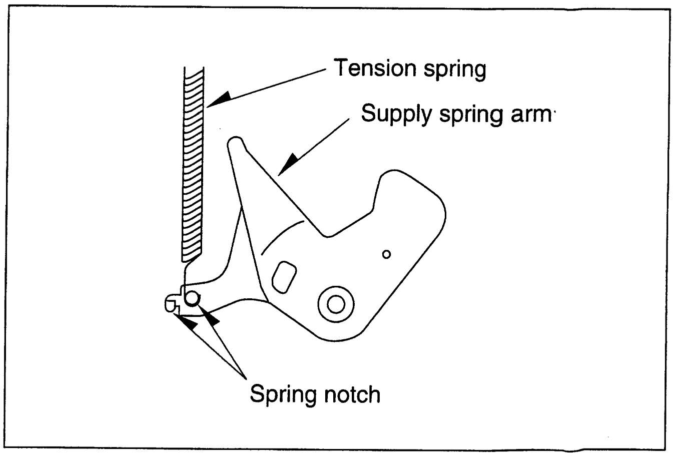

Tension spring
Supply spring arm
Spring notch

Fig. M3

5-3. P2 and P3 posts adjustment (PREADJUSTMENT)

Equipment Required:
Post Adjustment Screwdriver (VFK0329)

(1) Remove the Top Plate.

(2) Turn the Loading Motor until the unloading completes.

(3) Rotate the P2 and P3 Posts clockwise to the end. (Fig. M4)

(4) Rotate the P2 and P3 Posts twice counterclockwise. (Fig. M4)

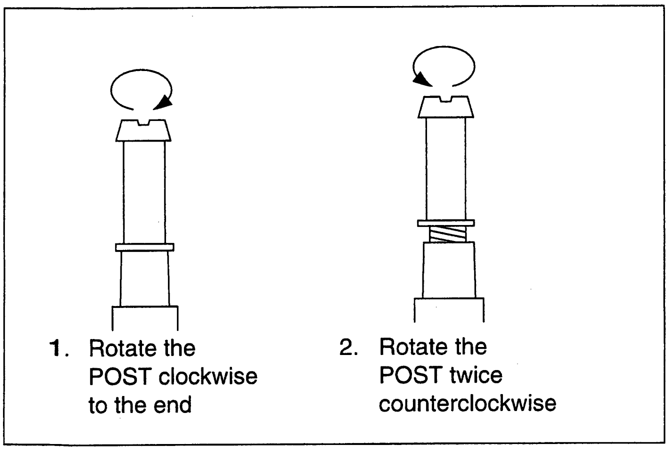

1. Rotate the POST clockwise to the end
2. Rotate the POST twice counterclockwise

Fig. M4

(5) Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P2, P3, and P4 Posts as shown in Fig. M5.

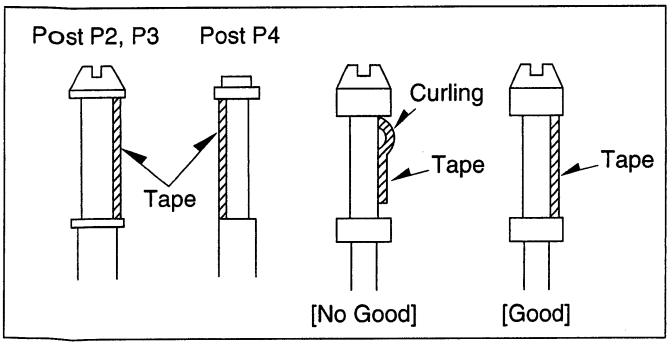


Fig. M5

(6) If the curling appears, readjusts the P2 and P3 Posts.

5-4. Tape interchangeability adjustment

Carry out the following procedures for Tape Interchangeability Adjustment to do it correctly and smoothly.

(1) P2 AND P3 POSTS ADJUSTMENT
(2) ADJUSTMENT OF P4 POST
(3) HEIGHT ADJUSTMENT OF A/C HEAD
(4) FINE-ADJUSTMENT OF A/C HEAD
(5) ADJUSTMENT OF X-VALUE (PREADJUSTMENT)
(6) FINE-ADJUSTMENT OF X-VALUE

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (6).

CAUTIONS: To make an Adjustment Mode for Tape Interchangeability, press the FF and EJECT buttons simultaneously 3 times to set the Service Mode 2.

In case of VCR mounted shuttle ring, turn the shuttle ring to FF and then press EJECT button.

In Loewe model, STOP button is used instead of FF button.

NOTE: Cleaning the Tape Transport path before adjusting of Tape Interchangeability. The detail portion is shown below.
P0 Post, Tension Posts, FE Head, P2 Post, Supply Inclined Post, Cylinder Unit, Take-up Inclined Post, P3 Post, A/C Head, P4 Post, Pinch Roller, Capstan Shaft, P5 Post. FE Head, Cylinder Unit, A/C Head and Capstan Shaft are more important parts and pay an attention to clean them.

5-4-(1). P2 AND P3 POSTS ADJUSTMENT

Equipment required:
Alignment Tape (PAL/SECAM: VFJ8125H3F)
(NTSC: VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

(1) Connect the oscilloscope to the output of the Head Amp as shown in Fig. M6.

NOTE: To get a stable waveform of the Head Amp output (observation point TW3001 and TW2001 located on Main C.B.A.) on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig. M6.

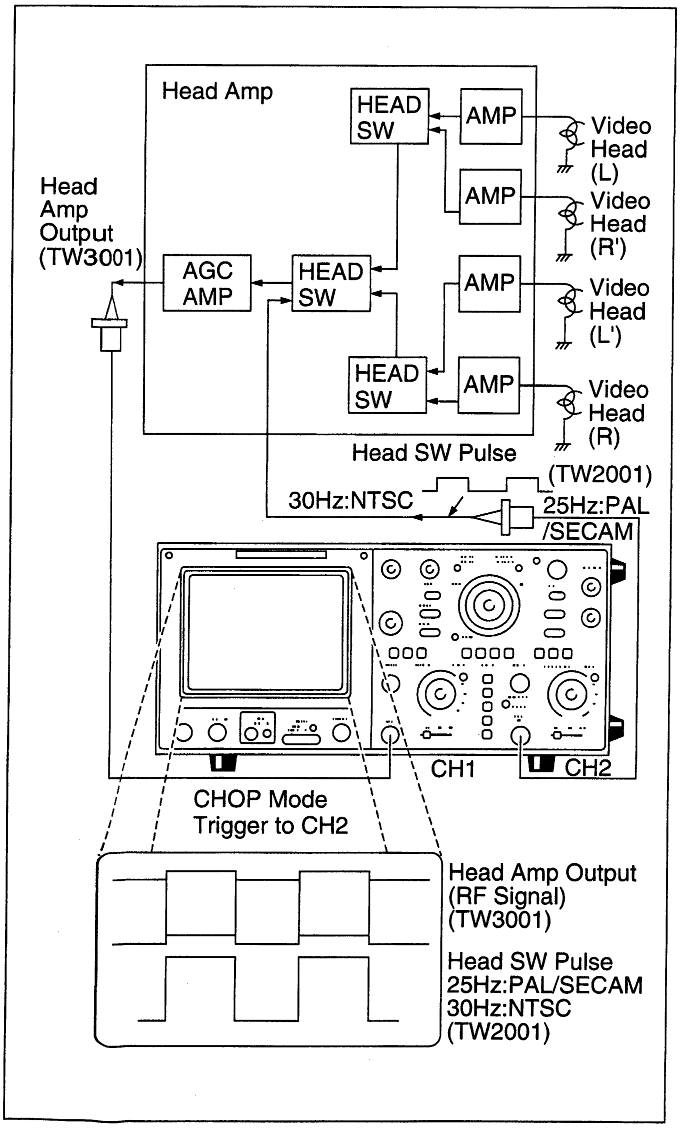

Head Amp
HEAD SW
AMP
Video Head (L)
AMP
Video Head (R')
Head Amp Output (TW3001)
AGC AMP
HEAD SW
AMP
Video Head (L')
HEAD SW
AMP
Video Head (R)
Head SW Pulse
(TW2001)
30Hz:NTSC
25Hz:PAL /SECAM
CH1
CH2
CHOP Mode Trigger to CH2
Head Amp Output (RF Signal) (TW3001)
Head SW Pulse 25Hz:PAL/SECAM 30Hz:NTSC (TW2001)

Fig. M6 Connect of Oscilloscope

(2) Playback the Alignment Tape.

(3) If the RF envelope appears like example "A" or "B" in Fig. M7, then adjustment of the tape guide post (P2: Entrance) is necessary.

(4) Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig. M7 "C".

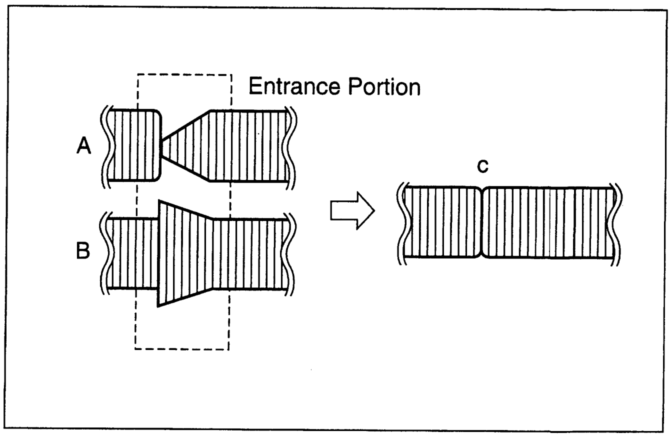

Entrance Portion
A
B
C

Fig. M7

(5) If the RF envelope appears like "D" or "E" in Fig. M8, then adjustment of the tape guide post (P3: Exit) is necessary.

(6) Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig. M8 "F".

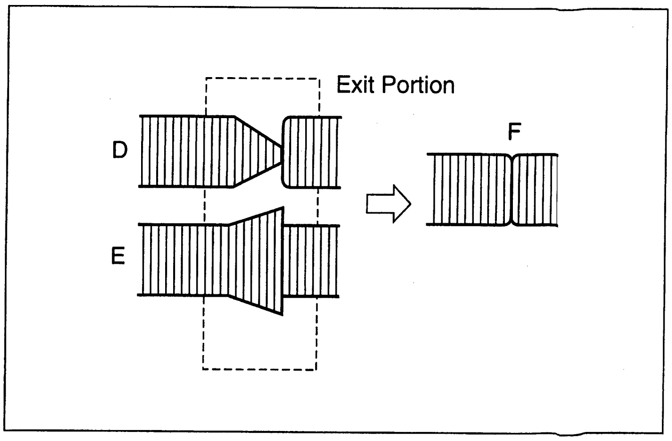

Exit Portion
D
E
F

Fig. M8

(7) Keep pressing the tracking up/down (∧ or ∨) buttons on the remote controller unit. The output envelope should vary nearly parallel with other condition as shown in Fig. M9.

(8) Set the tracking control into center fix position by pressing the tracking up/down (∧ and ∨) simultaneously and adjust for maximum RF envelope, whilst being as flat as possible.

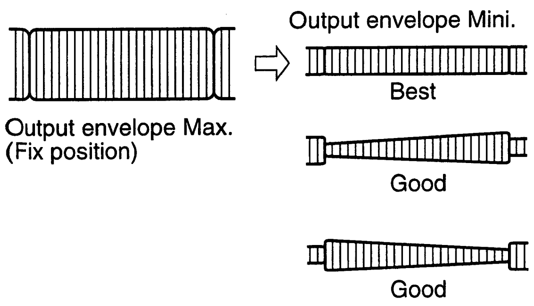


Fig. M9

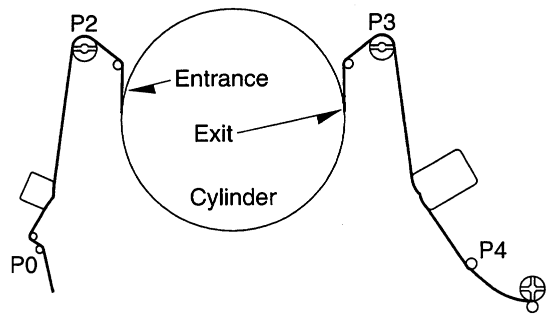


Fig. M10 Loading of Posts

5-4-(2). ADJUSTMENT OF P4 POST

(1) Install A/C Head on the Mechanism Chassis by one screw.

(2) Playback the Alignment Tape.

(3) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 Post.

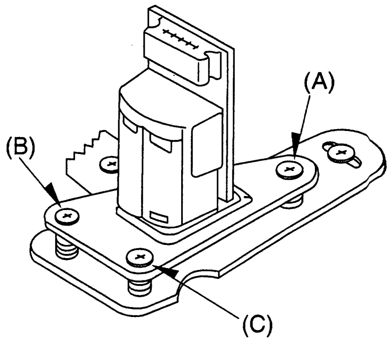
(4) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 Post.

(5) Connect the oscilloscope to audio output terminal.

(6) Rotate the screw (C) until audio signal is maximized.

NOTE: 1. The relation between the rotation direction of screws (A) and (B) and the condition of wrinkle on the lower edge at P4 Post as shown in Fig. M11.

2. Make sure that there is not the inclined wrinkle between P4 Post and Pinch Roller.



	SCREW (A)	SCREW (B)
So wrinkle appears on the lower edge of tape	COUNTER CLOCKWISE	CLOCKWISE
So wrinkle disappears on the lower edge of tape	CLOCKWISE	COUNTER CLOCKWISE

Fig. M11

5-4-(3). HEIGHT ADJUSTMENT OF A/C HEAD

<When moving the A/C Head up>

(1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 Post.

(2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.

(3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

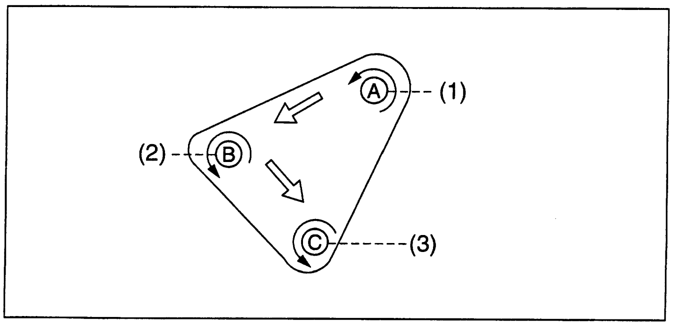


Fig. M12

<When moving the A/C Head down>

(1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 Post.

(2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.

(3) Rotate the screw (C) clockwise until the audio signal is maximized.

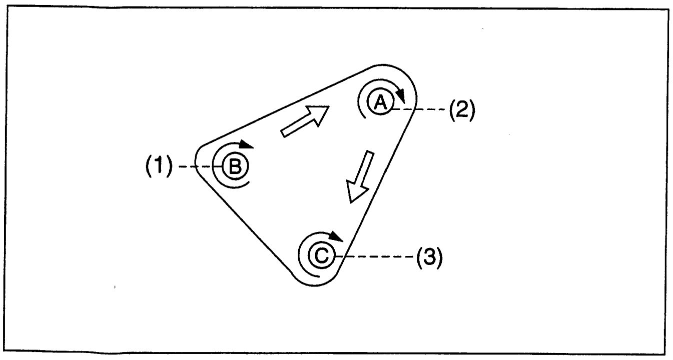


Fig. M13

5-4-(4). FINE-ADJUSTMENT OF A/C HEAD

(1) Connect the oscilloscope to the output of the Head Amp as shown in Fig. M6.

(2) Playback the Alignment Tape.

(3) Make sure that the condition of the wrinkle at P4 Post. If the condition of the wrinkle is out of specification, P4 Post adjustment has to be performed as follows.

Turn the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 Post.

Turn the screw (A) clockwise until the wrinkle disappears on the lower edge of tape at P4 Post.

(4) Turn the screw (C) until the audio signal is maximized.

NOTE: Make sure that the audio output does not increase when push the upper and lower edges of tape around A/C Head.

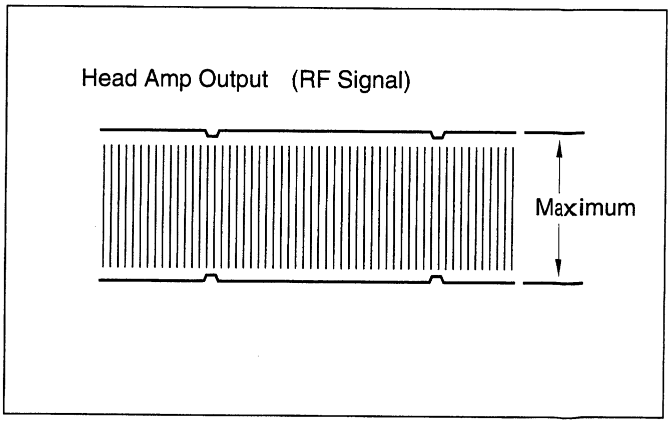


Fig. M14

5-4-(5). ADJUSTMENT OF X-VALUE (PREADJUSTMENT)

Equipment required:
Fine Adjustment Gear Drive (VFK0330)
Specification: Less than 15 msec.

(1) Connect the oscilloscope to the audio output and the video output. Both output signals should be fixed by the external trigger.

(2) Playback the Alignment Tape and set the tracking control into center fix position.

(3) Adjust A/C Head position by the Fine Adjustment Gear Driver (VFK0330) to meet the signal fault portion of the audio output and the video output signals (Less than 15 msec.).

(4) After meeting the signal fault portion, adjust A/C Head position by the Fine Adjustment Gear Driver (VFK0330) until the video envelope is maximized.

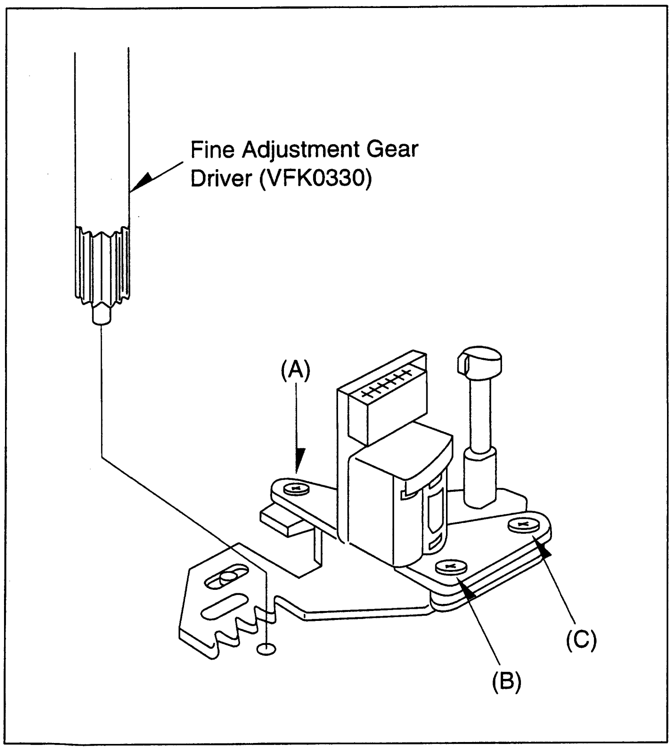


Fig. M15

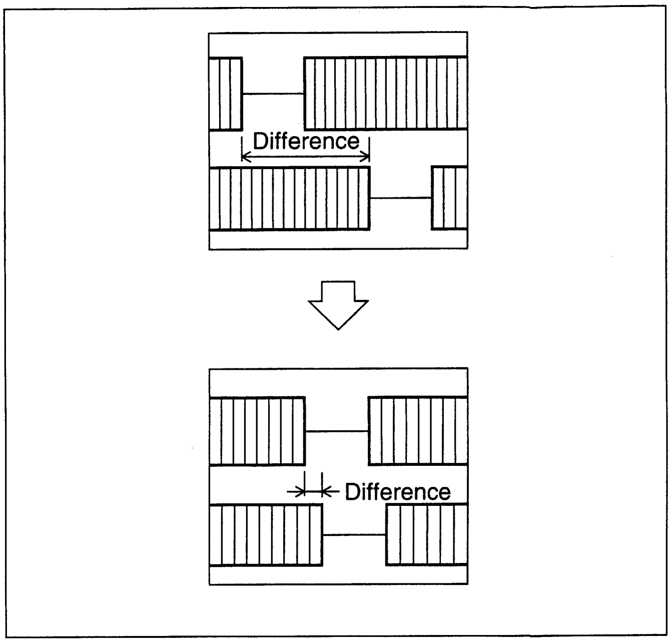


Fig. M16

5-4-(6). FINE-ADJUSTMENT OF X-VALUE

Equipment required:
Fine Adjustment Gear Drive (VFK0330)

(1) Connect the oscilloscope to the audio output and the video output. Both output signals should be fixed by the external trigger.

(2) Playback the alignment tape and set the tracking control into center fix position.

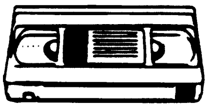
(3) Adjust A/C Head position by the Fine adjustment Gear Driver (VFK0330) until the video envelope level is maximized at the tracking center fix position.

NOTE: During X-Value Fine Adjustment, in case the video envelope level became 0, Preadjustment of X-value should be adjusted again due to it is possibility to vary the X-value adjustment.

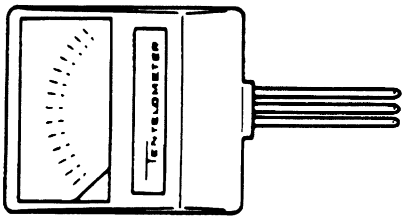
Servicing Fixtures & Tools

VFJ8125H3F
PAL VHS Alignment Tape

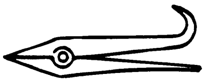
VFM8080HQFP
NTSC VHS Alignment Tape



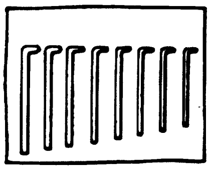
VFK0132
Back Tension Meter
(Tentelometer, Made in U.S.A.)



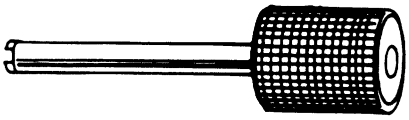
VFK0335
Retaining Ring Remover
(3mm/4mm)



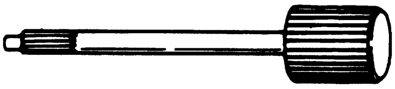
VFK0326
Hex. Wrench Set
(0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm)



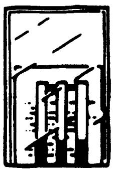
VFK0329
Post Adjustment Screwdriver



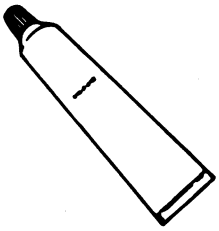
VFK0330
Fine Adjustment Gear Driver



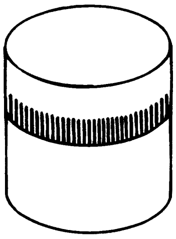
VFK27
Hand Cleaning Stick



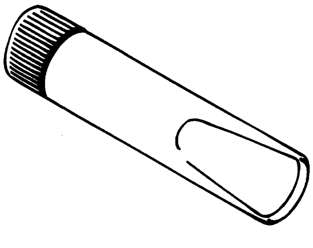
VFK1024
Morlytone Grease



VFK1298
Floil Grease



VFK1301
Silicone Grease

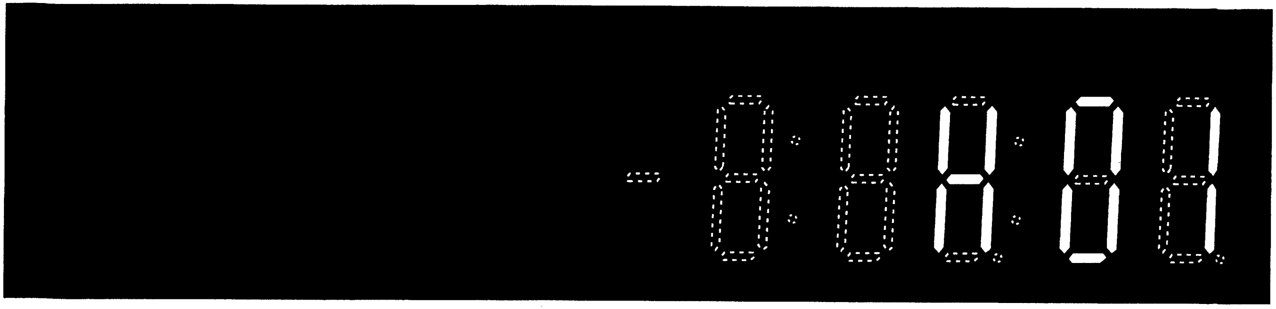


6. SELF-TEST INDICATION DISPLAY

This VTR has a self-diagnosis and display function. If the VTR detects trouble during installation or during use, one of the following fault indication codes will automatically appear in the VTR display. Fault indication codes are displayed in the form of a single English letter followed by two numbers, as for example "H01".

Note:
1. The indication "U" is displayed on the FIP while power remains on.
2. Otherwise, the indication "H" or "F" is displayed on the FIP, and the power is automatically turned off.
   When the power is turned on again, the fault indication code will disappear and the unit will retrun to normal display mode (either clock or counter is displayed).
3. This fault indication code will be stored in the microprocessor even with the AC plug disconnected.
   The two-digit number portion of the stored fault indication code can be redisplayed in the FIP's "second" display portion (the last 2 digits on the light) by placing the unit is Service Mode Number 2 when turning on Service Information Display as for example "01" or "02" etc.
   If a second error occurs, only the most recent error will be displayed and stored.
4. To erase the stored fault indication code data, press FF and EJECT buttons for 5 seconds.

< FIP >



INDICATION	CAUSE	REMEDY/CHECK
U 10	Dew formation.	Wait until the indication disappears.
H 01	After cylinder lock is detected, the cylinder does not start rotating again even after tape unloading.	Check the cylinder unit and the cylinder motor drive circuit.
H 02	Cassette tape is not wound up during tape unloading except Eject mode.	Check the capstan unit and the capstan motor drive circuit.
F 03	Mechanism locks during mode transition except Eject mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment. 3. Check the mode switch.
F 04	Mechanism locks during tape unloading.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment.
F 06	Mechanism locks after tape unloading in Eject mode.	1. Check the loading motor drive circuit. 2. Check the mechanism phase alignment for cassette holder unit.
F 07	During recording mode recording signal is less than the normal condition.	Protection of the overcurrent flowing in transistor which produce the power supply for recording mode.
F 08	Recording circuit works except recording mode.	Check the recording circuit.
H 16	Cylinder lock detection.	Check the cylinder unit and the cylinder motor drive circuit.
H 17	Supply reel mechanism lock detection.	Check the supply reel mechanism and the supply reel circuit.
H 18	Take-up reel mechanism lock detection.	Check the take-up reel mechanism and the take-up reel circuit.

Fig. T1 Self-Test indication Display

7. SERVICE INFORMATION DISPLAY

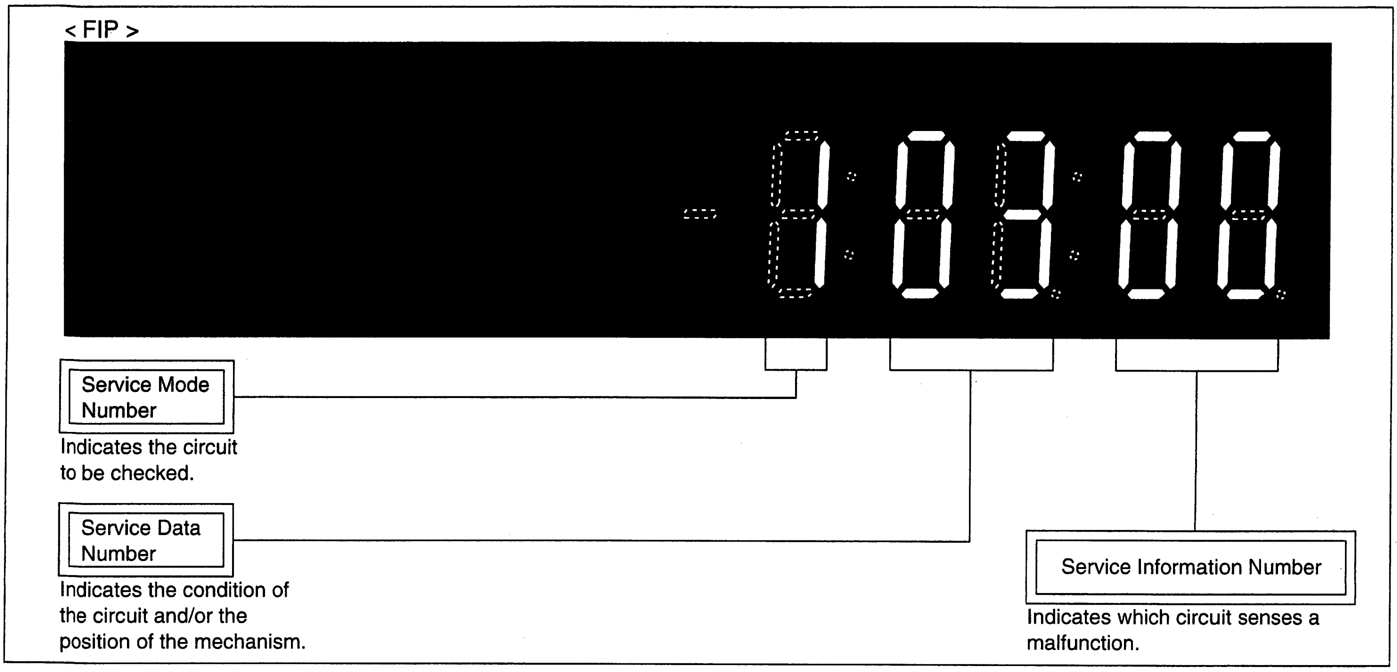

< FIP >
1 03 00
Service Mode Number
Indicates the circuit to be checked.
Service Data Number
Indicates the condition of the circuit and/or the position of the mechanism.
Service Information Number
Indicates which circuit senses a malfunction.

Fig. D1 Service Information Display

7-1. Purpose of Service Information Display

This information aids trouble shooting by indicating the source of the malfunction. The service mode number & service data number are used by the technician during repair while the service information can be used by consumer to diagnose malfunctions allowing the technician to provide a more accurate repair cost estimate and reduce repair time.

7-2. Turning on Service Information Display

Press FF and EJECT buttons simultaneously for more than 3 seconds. In case of VCR mounted shuttle ring, turn the shuttle ring to FF and then press EJECT button for more than 3 seconds.

In Loewe model, STOP button is used instead of FF button.

In the Service Information Display, there are four digits divided into 3 functions.

The first digit indicates which of the 7 service modes that the unit is currently in.

MODE 1: Checks tape protection circuit.
MODE 2: Checks tape transport mechanism.
MODE 3: Checks mode switching operation.
MODE 4: Checks control buttons.
MODE 5: Checks capstan motor.
MODE 6: Checks cylinder motor.
MODE 7: Checks loading/unloading operation.

The second and third digits are service data which indicate the condition of the circuit or mechanism being checked.

The forth digit is the service infromation display. it is to be used by the consumer to help determine the source of a malfunction. The service information display operates independently of the service modes and stores the fault indication in memory for as long as AC power is not supplied.

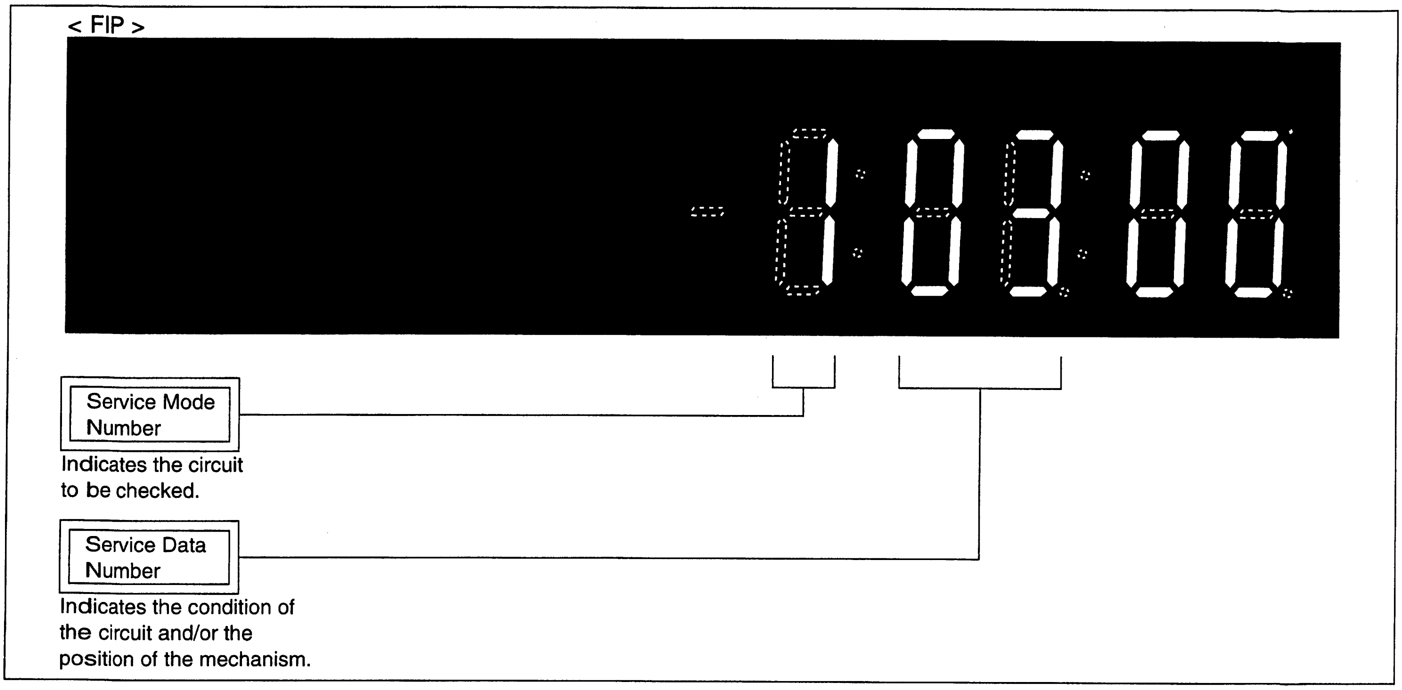

< FIP >
Service Mode Number
Indicates the circuit to be checked.
Service Data Number
Indicates the condition of the circuit and/or the position of the mechanism.

Fig. D2 Service Mode Number and Service Data Number on F.I.P.

7-3. Use of Service Modes

(1) Turn on Service information Display.

(2) To change Service Modes, press FF and EJECT buttons simultaneously.

(3) Mode 0: Storing the process number when the fault happened.

(4) Mode 1: Checks that the sensor LED, Supply & Take-up sensor circuits checks the circuits by blocking the light from the sensor LED to either or both Supply & Take-up Sensors. When the light is blocked to both sensors, "00" should be indicated on the service data number.
When the light is blocked to the supply sensor, "01" should be indicated.

(5) Mode 2: Checks the mode switch circuit while indicating mechanism position.
Service Data Numbers indicate the position of the mode switch and there by the mechanism position.

(6) Mode 3: Checks that mode switch circuit operations have been completed.
Service Data Number should indicate "00" after each mechanism operation is completed.

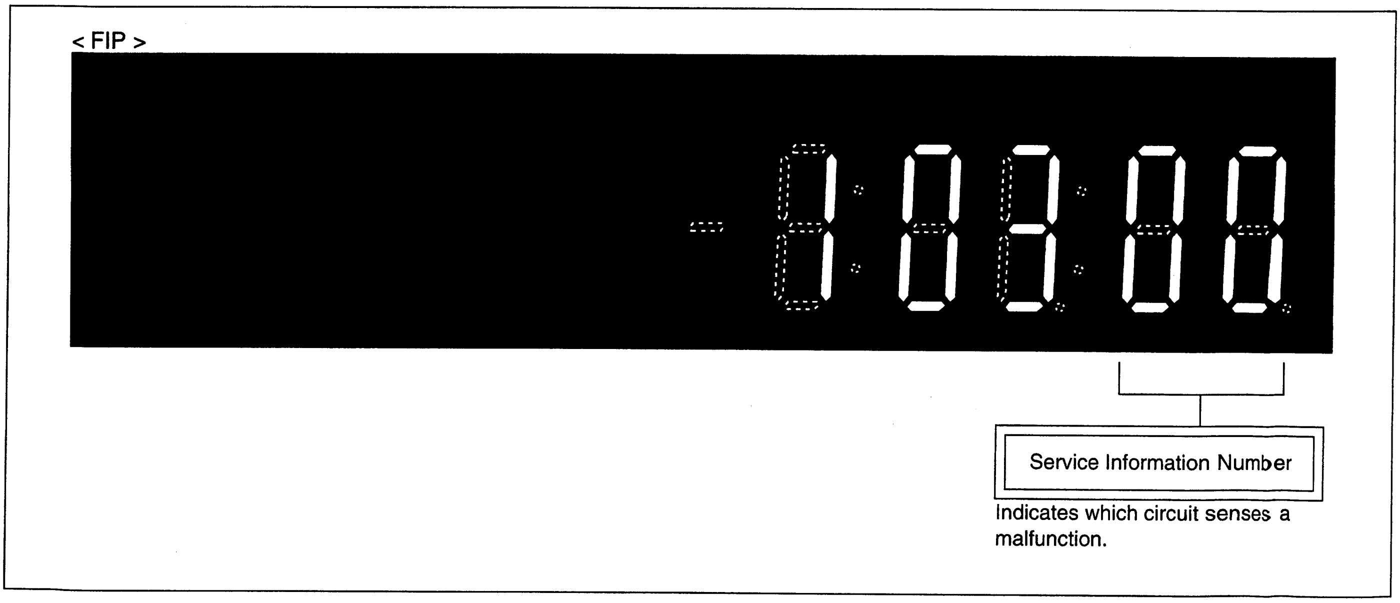
(7) Mode 4: Checks the operation circuit.
Indicates if SYSTEM CONTROL IC receives the operating commands from the mode buttons and/or remote controller.

(8) Mode 5: Checks the capstan motor circuit.
Indicates if the SYSTEM CONTROL IC has received the command to rotate the capstan motor.

(9) Mode 6: Checks the cylinder motor circuit.
SYSTEM CONTROL IC has received the command to rotate the cylinder motor.

(10) Mode 7: Checks the loading/unloading operation.
The loading motor rotates for loading operation when the "PLAY" button is pressed.
The loading motor rotates for unloading operation when the "STOP" button is pressed.
This mode can be displayed indefinitely until the OPERATE button is pressed.

<NOTE> Refer to Fig. D5 for details of Service Data Numbers.



Indicates which circuit senses a malfunction.

Fig. D3 Service Information Number on F.I.P.

7-4. Service Information Number

Refer to Fig. D4 for details of Service Infromation Number.

NOTE: The Service Information Number display is independent of the service mode display. The Service Information Number will be stored as long as AC power is not supplied. (If can be displayed in the Service Mode 2.)

If a second error occurs, only the most recent error will be displayed.

Service Information Number	Malfunction
00	Normal condition (No problem)
10	Dew formation
01	Cylinder stop
02	Tape reel stop
03	Stop at position other than 04 or 06
04	Stop during unloading
06	Stop during Cassette-in/Eject operation
07	Recording circuit stop in recording mode.
08	Recording circuit stop except recording mode.
16	Cylinder lock
17	Supply reel lock
18	Take-up reel lock
2*	PG shifter automatic adjustment error

Fig. D4 Detail Service Information Number

7-5. Test Mode

When the test terminals are shorted during turning off condition, the following operation will be performed after AC power is applied. Test Mode Information will be displayed on FIP instedof linear counter. To release Test mode, test Terminales should be opened.

(1) Power will be turned on automatically when AC power is applied.

(2) The direct operation of buttons are able to be performed.
(Examle) PLAY⟷REC, REC→EJECT, REC→FF/REW

(3) In case the mechanism is in PLAY position, the mechanism goes into PLAY mode when AC power is applied.

(4) Playback CVC function is turned off.

(5) Tracking is fixed under power off and cassette in. Auto tracking does not perform.

(6) For recording current adjustment.

(7) For reverse slow tracking adjustment.

(8) When the power is turned off, tracking is fixed.

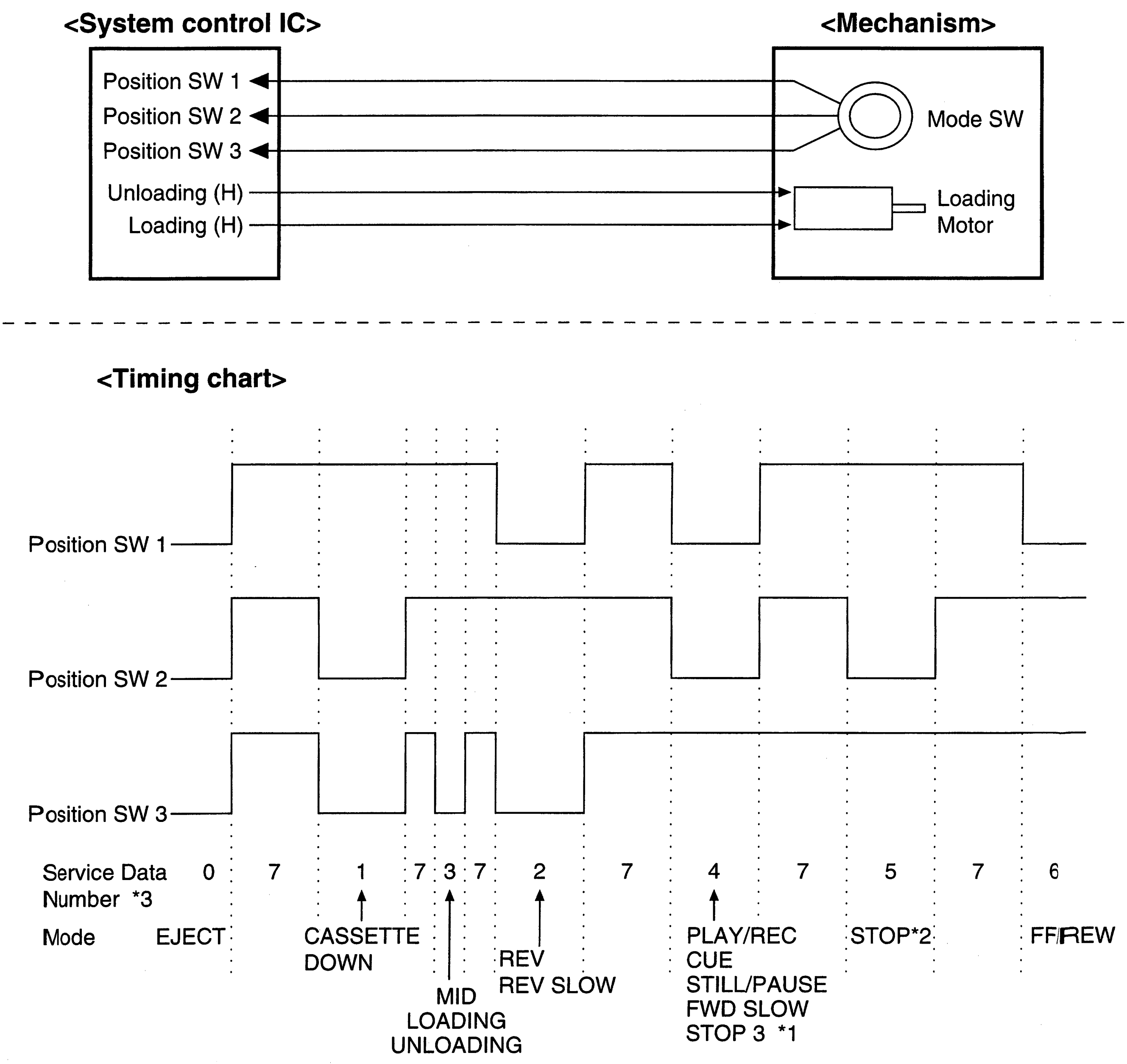
Service Mode Number	Note for checking Service Data Numbers	Service Data Numbers	Indication	Remarks
1	—	00	No light detected at either sensor	Tape not required.
		01	Tape beginning Light to Supply photo sensor is blocked.	
		02	Tape end Light to Take-up photo sensor is blocked.	
		03	Light detected at both sensors.	
2	—	00	EJECT	Tape required *1. STOP3: Pintch roller is on Capstan motor shaft. *2. STOP: Pintch roller is off Capstan motor shaft.
		01	Cassette down	
		02	REV, REV SLOW	
		03	Loading/Unloading	
		04	PLAY, REC, STILL, PAUSE, CUE, FWD SLOW, STOP3*1	
		05	STOP*2	
		06	FF/REW	
		07	Intermediate position	
3	Disregard service data displayed until mechanism operation is completed. Then the display should indicate "00".	00	Any display other than "00" indicates a fault in the mode switch circuit or system.	Tape required.
4	Display only when the operating button is pressed.			Tape not required.
5	Left digit only, disregard Right digit display.	8 1 Left Right Digit Digit	8, 9, u, A, —, n, L and no display indicate that the Capstan motor "PLAY" command received by System control microprocessor.	Tape required. If a symbol other than those listed is displayed, a mulfunction in that circuit is indicated.
	Right digit only, disregard left digit dispaly.	8 7 Left Right Digit Digit	1, 2, 3, 4, 5, 6, 7 indicate that the Capstan motor "CUE, FF, FWD SLOW" commands received by system control microprocessor.	
	Right digit only, disregard left digit display.	8 — Left Right Digit Digit	8, 9, u, A, —, n, L and no display indicate that the Capstan motor "Reverse, REW, Reverse Slow" commands received by system control microprocessor.	
6	Left digit only, disregard Right digit display.	1 0 Left Right Digit Digit	1, 3, 5, 7, 9, A, n and no display indicate that the cylinder motor "ON" command received by system control microprocessor.	Tape required. If a symbol other than those listed is displayed, a mulfunction in that circuit is indicated.

Fig. D5 Service Data Display and Indication

7-6. Timing chart from Mode SW to System control IC

System control IC senses the mechanical position through the Mode SW.

Fig. D6 shows the timing for service mode number 2.


<System control IC>
<Mechanism>
Position SW 1
Position SW 2
Position SW 3
Unloading (H)
Loading (H)
Mode SW
Loading Motor
<Timing chart>
Position SW 1
Position SW 2
Position SW 3
Service Data Number *3
0
7
1
7
3
7
2
7
4
7
5
7
6
Mode
EJECT
CASSETTE DOWN
MID
LOADING
UNLOADING
REV
REV SLOW
PLAY/REC
CUE
STILL/PAUSE
FWD SLOW
STOP 3 *1
STOP*2
FF/REW

*1 : Stop 3 ;The Pinch roller is on the Capstan motor shaft.

*2 : Stop ;The Pinch roller is off the Capstan motor shaft.

*3 : Service Data Number; This is for Service Mode Number 2.

Fig. D6 Timing chart of Mode SW

8. SYSTEM CONTROL CIRCUIT & MECHANISM CONTROL CIRCUIT

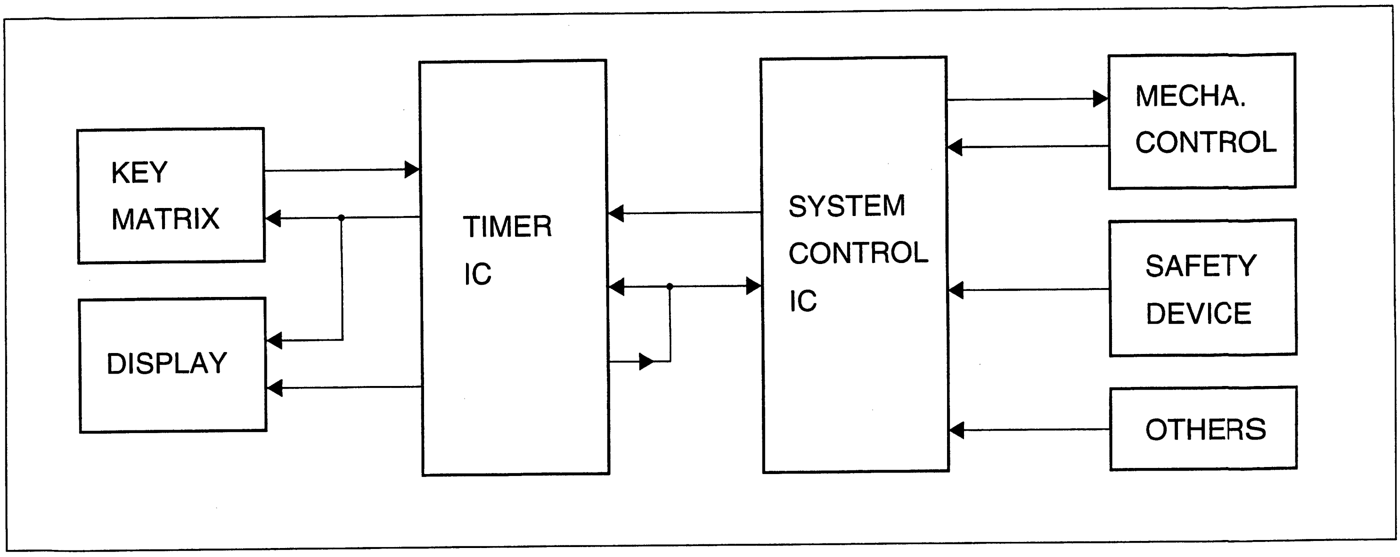


Fig. S1 Overall Block Diagram of System Control Circuit

8-1. STOP3 Specification

(1) The STOP3 is the playback stand-by mode.

(2) The unit is put into the STOP3 position after tape loading if the cassette tape does not have a clear leader tape.

(3) If the unit is in the STOP3 position when the power is switched off (included the Timer stand-by mode), the unit goes to the STOP position.

(4) If the cassette is in the unit when the power is turned on, the unit goes to the STOP3 position.

(5) When the cassette tape has clear leader tape, the unit is in loading mode after winding up the clear leader tape by Take-up reel at the cassette down position and the unit goes to STOP3 position.

8-2. Stand-by in the STOP3 position

(1) The unit goes to STOP3 position when the Stop mode is selected during the Play or Rec operations. The unit then loosens the tape tension by performing the Reverse Slow.
The Reverse Slow corresponds to the FG 40 pulses of the capstan (irrespective of SP/LP modes). The cylinder continues to rotate.

(2) After about 5 minutes in STOP3 mode, the unit shifts to the Stop position and then the unit stops the cylinder rotation.

8-3. Supply and Take-up Sensors

Supply and Take-up photo transistors are used to sense the beginning and end of a tape. The tape has transparent leaders at the beginning and end.

When these transparent leaders enter the tape transport path, they allow infrared light from the sensor LED to reach either one of the tape end sensors (photo-transistor).

If the Take-up end sensor detects the light, the microprocessor SYSTEM CONTROL IC places the VCR in the Stop mode and then performs a short Cue.

If the Supply end sensor is triggered, the microprocessor activates the Stop mode and the Rewind mode. The Rewind mode continues until the Take-up end sensor detects the end of the tape. The tape beginning is detects by a low signal at SYSTEM CONTROL IC Take-up photo terminal. The tape end is detected by a low signal at SYSTEM CONTROL IC Supply photo terminal.

If the light is received at both sensors at same time, the cassette is ejected.

<Operation after detecting the beginning and the end of tape>

Mode	Detection of the beginning	Detection of the end
Power off→on	Short CUE	Short REW
Cassette in	Short CUE	Short REW
Loading	Short CUE	Short REW
FF/CUE	——	Auto REW
REW/REV	Short CUE	——
PLAY, REC	——	Auto REW
Timer REC	——	Power off

Both ends of tape detection (tape cut, no cassette),

(1) Cassette in: The cassette tape is ejected

(2) Other mode: The unit goes to Stop mode and it is impossible to operate except EJECT key.

(3) Timer REC: Power is turned off after short CUE is performed.

8-4. Safety Tab Switch

A recorded video cassette can be protected against accidental erasure by breaking off the tab on the cassette. The cassette can now only be used for playback. To be able to record on the cassette, cover the hole with adhesive tape. If the safety tab on the cassette has been removed, Safety Tab Switch is off (open) and high signal is supplied to SYSTEM CONTROL IC Safety Tab terminal. The SYSTEM CONTROL IC will not go into the recording mode and automatically places the VCR in the playback mode.

8-5. Dew Sensor

If excessive moisture or condensation is present inside the machine (an internal humidity of more than 98%) the unit will stop if running. Until the moisture level decreases only the Eject mode will operate. To sense the humidity, a dew sensor is used. The sensor is a special variable resistor which change resistance with ambient humidity.

The sensor ranges in resistance from about 5K ohm at 90% humidity to about 50K omh at 98% humidity. Normally, the voltage across the sensor is low because of its low resistance.

But if moisture condenses inside the unit, the SYSTEM CONTROL IC voltage of Dew terminal increases to indicate a Dew condition.

Tape	Mode	Dew sensor ON	Dew sensor OFF
OUT	Power	Compulsory Power on	Power off
	Dew indication	Indicate “d” and “U10”	Normal indication
	Cylinder	Rotating *1	Stop
	Key operation	Not possible *2	Possible
	Cassette in	Immediately a cassette is ejected after it goes to cassette down position.	Possible
IN	Power	Compulsory Power on	Power off
	Dew indication	Indication “d” and “U10”	Normal indication
	Cylinder	Rotating *1	Stop
	Key operation	Not possible *2	Possible
	Cassette condition	A cassette goes to down position and is in stand-by mode.	Stand-by mode at STOP3 position.

*1: When the cylinder locks in dew mode, it will be released until dew sensor is truned off.

*2: The keys which do not relate to the tape running operation, are able to be used.

Dew sensor on:	During Dew formation is detected and 80 minutes after completion of Dew detection.
Dew sensor off:	80 minutes later after copmletion of Dew detection.

8-6. Setting time for each mode

The time is set on each mode in order to protect tape and capstan driver. When the setting time is over, the mode is gone to the next mode.

Mode	Setting time	Switching mode
STILL, PAUSE	Approximately 5 minutes	STOP
CUE/REV lock	Approximately 10 minutes	PLAY
SLOW	Approximately 10 minutes	STOP

8-7. Operation of short CUE

Short CUE stops when the Take-up photo sensor detects the black portion of the tape.

However its sensor does not detect the black portion within 4.0±1.0 sec., the mode except Power on/off and Eject modes will be abe to be operated after the unit stops. This is same as the timer over operation of the reel lock.

8-8. Loading/Unloading Mechanism lock

Loading and unloading times are set, and in case the mechanism locks during loading or unloading operation within the defined time, the unit detects the mechanism lock and loading motor reverses or stops.

Loading operation lock:	Cassette tape is unloaded and ejected within 5 seconds.
Unloading operation lock:	Power is truned off within 5 seconds.

8-9. Cassette loading/unloading lock

(1) Mechanism locks during the cassette in operation.

① Cassette tape is ejected approximately 2 seconds later when the mechanism locks during the cassette in operation.

② In case mechanism locks during eject operation, cassette tape is inserted and power is turned off approximately 2 seconds later.

③ When Mechanism locks during cassette in operation, power is turned off approximately 2 seconds.

In case the mechanism lock is released on the way and cassette is ejected, the unit continues the normal operation.

(2) Mechanism locks during the eject operation.

① Cassette tape goes to cassette down position approximately 2 seconds later and power is turned off when mechanism locks during eject operation.

② Mechanism locks during cassette down operation, power is turned off.

8-10. Reel lock operation

When the Suuply or Take-up reel mechanism locks during the tape running, the following operation is performed in order to protect the tape and the capstan driver.

In case of Take-up reel mechanism lock, the detecting time is defined depending on the mechanism position and capstan speed to minimize the tape supplying from supply side.

FF/REW : Unloading and loading. The unit goes to CUE/REV mode.

PLAY/CUE/REV : Unloading till the cassette down position and loading. The unit goes to STOP3 position.

In play and CUE/REV mode, the reel pulse cycle is started to count after the mechanism mode is fixed.

In case the counted pulse cycle exceeds the defined value, the unit goes to STOP mode due to judge that lock of reel mechanism is detected.

<The value of reel lock detection time>

NTSC/SP mode

Mode	Speed (Ratio)	Time (S)
PLAY	±1	3.5
CUE/REV	±2.5	1.6

PAL/SP mode

Mode	Speed (Ratio)	Time (S)
PLAY	±1	3.5
CUE/REV	±2.5	1.6

In FF/REW mode, the unit goes to CUE/REV mode and continues the tape running in the following case.

1. (1) Take-up reel pulse can not be detected within 5 seconds after the unit shifted to REW mode.
   (2) Supply reel pulse can not be detected within 5 seconds after the unit shifted to FF mode.
2. The reel pulse can not be detected more than 2 seconds sequentially within 5 seconds after completing the mechanism mode shift.
3. The reel pulse can not be detected more than 800 msec. past 5 seconds after completing the mechanism mode shift.

8-11. Cylinder lock

<Start rotation>

When the cylinder neither start rotating nor go to the stability rotation within 5 seconds, it is unloading under keeping the mode. In case the cylinder starts rotating and goes to the stability rotation, the mechanism loads again and continues the holding mode.

If it is not possible, Power is turned off and cylinder trouble "H01" is displayed.

<During rotation>

The head switching pulse is supplied to the cylinder when the cylinder starts the stable revolution. In case the head switching pulse does not come to the cylinder within 0.5 seconds, the cylinder lock is judged and the following operation is activated.

Timer REC mode: Power off

PLAY, REC mode: STOP (Mechanism shifts to MID. position and the unit goes to stand-by mode.)

8-12. Mode transition

The relation between the present mode and operation key is shown in the following table.

PRESET MODE	OPERATION KEY							
	P SW	EJECT	STOP	REW	FF	PLAY	PAUSE	REC
P-OFF	P-ON	EJECT	—	—	—	PLAY	—	—
EJECT	P-OFF	—	—	—	—	—	—	—
STOP	P-OFF	EJECT	*3	REW	FF	PLAY	—	REC
REW	P-OFF	EJECT	STOP	REV	FF	PLAY	—	—
FF	P-OFF	EJECT	STOP	REW	CUE	PLAY	—	—
REV	P-OFF	EJECT	STOP	—	*1	PLAY	*2	—
CUE	P-OFF	EJECT	STOP	*1	—	PLAY	*2	—
PLAY	P-OFF	EJECT	STOP	*1	*1	—	*2	—
STILL	P-OFF	EJECT	STOP	*1	*1	PLAY	PLAY	REC PS
REC	P-OFF	—	STOP	—	—	—	REC PS	—
REC/PS	P-OFF	—	STOP	—	—	—	REC	REC

Pressing two keys simultaneously, the key operation is going to be ineffective.

*1: The unit goes to CUE/REV lock mode by pressing FF/REW key lightly (less than 0.7 seconds) during Play, still and REV mode. CUE/REV mode will be returned previous mode when FF/REW key is pressed more than 0.7 seconds.

*2: In case PAUSE key is pressed less than 1 second other than STILL mode, the unit goes to STILL mode.

If PAUSE key is being held to press, the unit goes to STILL mode and then goes to 1/10 SLOW mode after 1 second. SLOW mode has not been set in 2 Head LP mode model.

*3: When STOP key is pressed more than 3 seconds while a cassette tape is in the unit, the cassette tape is ejected.

8-13. Power on reset

When the power is turned on, the unit is going to reset and the following datas are cleared.

(1) Position switch data

(2) Operation mode data

(3) Prohibition flags

In case the mechanism is in cassette down position, tape slack is removed as the initial operation and the unit goes to STOP3 position.

8-14. Linear time counter operation

The counter value will be gone up/down by counting control pulse. As for NTSC system during Play/Rec mode, counter value goes up/down every 30 pulses. As for PAL system during Play/Rec mode, counter value goes up/down every 25 pulses.

8-15. Tape speed in CUE/REV mode

	CUE/REV mode		Hyper-search mode	
MODE	NTSC	PAL	NTSC	PAL
SP mode	9 times	11 times	9 times	11 times
EP or LP mode	11 times	11 times	29 times	19 times

8-16. Automatic functions

(1) Automatic Power on

① Under power off, when a cassette tape is inserted, power is turned on automatically and cassette tape is loaded.

② Under power off and a cassette tape has been inserted, when PLAY key is pressed, power is turned on automatically and goes to PLAY mode.

(2) Automatic play

When a cassette tape removed safety tab is inserted, the mode goes into Play mode.

(3) Automatic rewind

When tape running is reached to the end of tape, automatically goes to Rew mode and stops when tape running will be reached to the beginning of tape.

In case of Timer recording, short Rew is performed for 2 seconds and power is turned off when tape running is reached to the end of tape.

(4) Power off and Eject

Under power off and a cassette tape has been inserted, when Eject key is pressed, a cassette tape is ejected and power is turned off.

8-17. CUE/REV lock mode

When FF/REW key is pressed lightly (less than 0.7 seconds) during Play, STILL and REV mode, unit goes into CUE/REV mode. To release CUE/REV mode, FF/REW key should be pressed more than 0.7 seconds.

8-18. Hyper-search mode

When FF/REW key is pressed during FF/REW mode, unit goes into CUE/REV mode.

This mode is activated while keeping FF/REW key pressed.

When releasing FF/REW key pressed, this mode is released.

8-19. FF/REW speed

Maximum tape speed is approximately 4.5 m/s during the stable running.

8-20. FF/REW time

The tape running from the beginning to the end of T-120 type (E-180 type) cassette tape is able to be completed within 90 seconds.

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MATSUSHITA ELECTRIC

Order No. VRD9710036S3

Service Manual

Supplement

Effective from : Running Change

Video Product

Model No. All Z mechanism

Subject : Change of Mechanism Parts

Please use this service manual together with the service manual for Order No.
Model No. All Z mechanism

INTERCHANGEABILITY CODE									See the I/C column on the following Part Number List				
	Parts	Production		Parts	Production		Parts	Production		Parts	Production	E	Addition
A	Original	Early	B	Original	Early	C	Original	Early	D	Original	Early	F	Deletion
	New	Late		New	Late		New	Late		New	Late	G	Other

Parts Number List

Ref No.	Original Part No.	New Part No.	Part Name & Description	I/C	Remarks
19 (1)	VED0363	VED0412	A/C HEAD UNIT	B	
49 (1)	VXL2737	VXL2733	SUPPLY BRAKE ARM UNIT	G	

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Order No. VRD9802006S3

Service Manual

Supplement

Video Product

Model No.
ALL Z Mechanism

Effective from : First Production

Subject : Revision of Service Manual

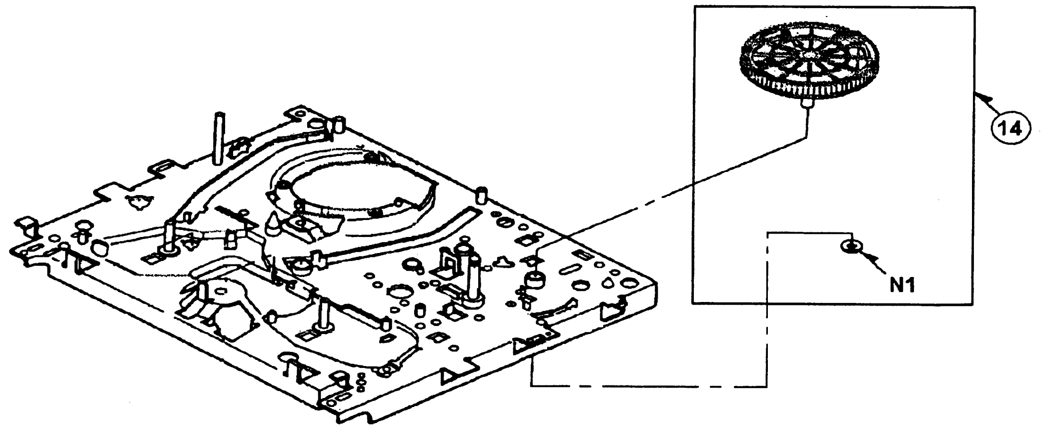
Please use this service manual together with the service manual for Order No.
Model No. All Z Mechanism

INTERCHANGEABILITY CODE												See the I/C column on the following Part Number List	
	Parts	Production		Parts	Production		Parts	Production		Parts	Production	E	Addition
A	Original	Early	B	Original	Early	C	Original	Early	D	Original	Early	F	Deletion
	New	Late		New	Late		New	Late		New	Late	G	Other

Parts Number List

Ref No.	Original Part No.	New Part No.	Part Name & Description	I/C	Remarks
14 (1)	VDG1220	VDG1220KIT	MAIN CAM GEAR KIT	G	

MAIN CAM GEAR KIT (VDG1220KIT) contains MAIN CAM GEAR (VDG1220) and PUSH NUT (VHN0311) as shown in below.



⚠ WARNING
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